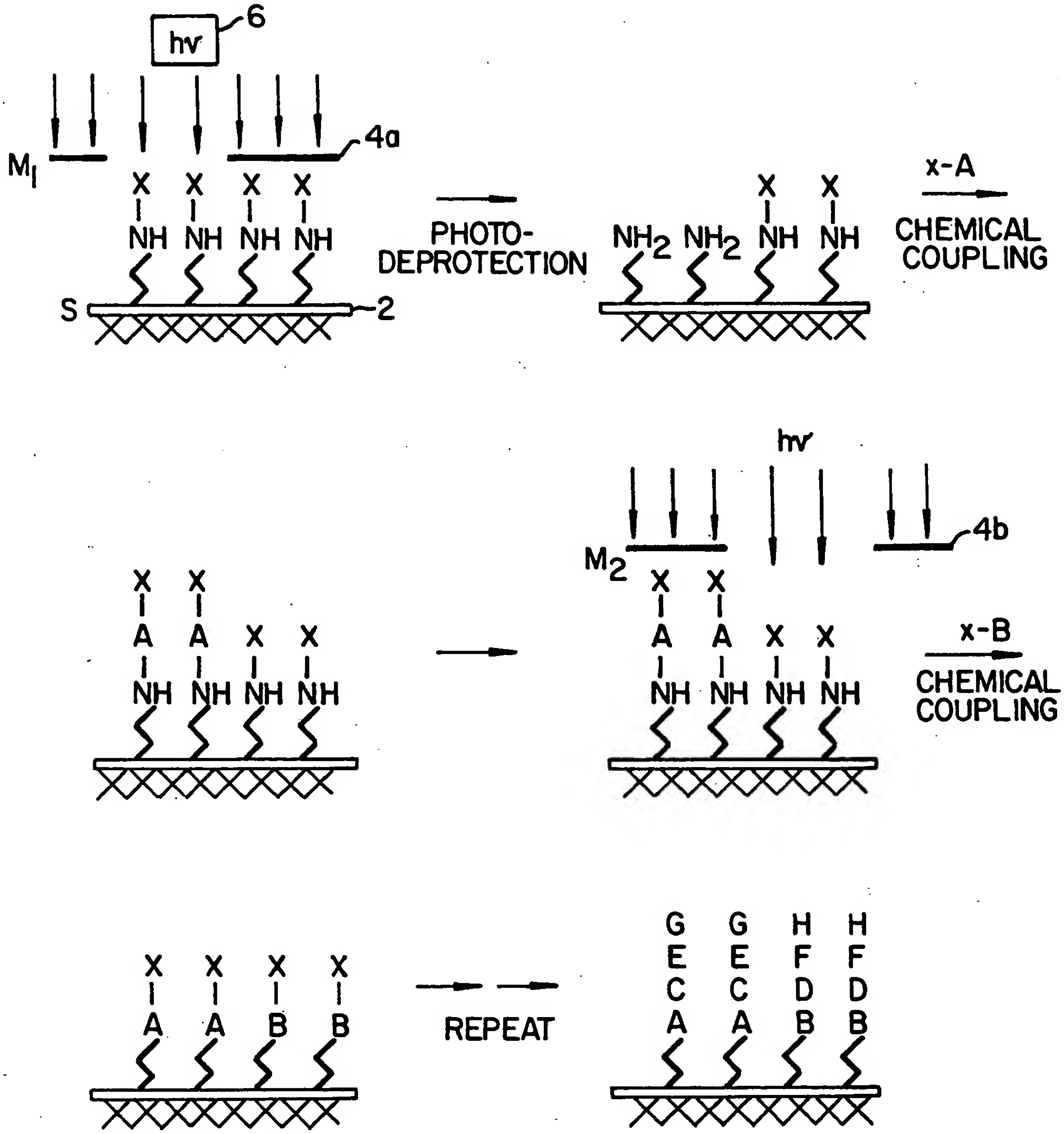


FIG. 1.

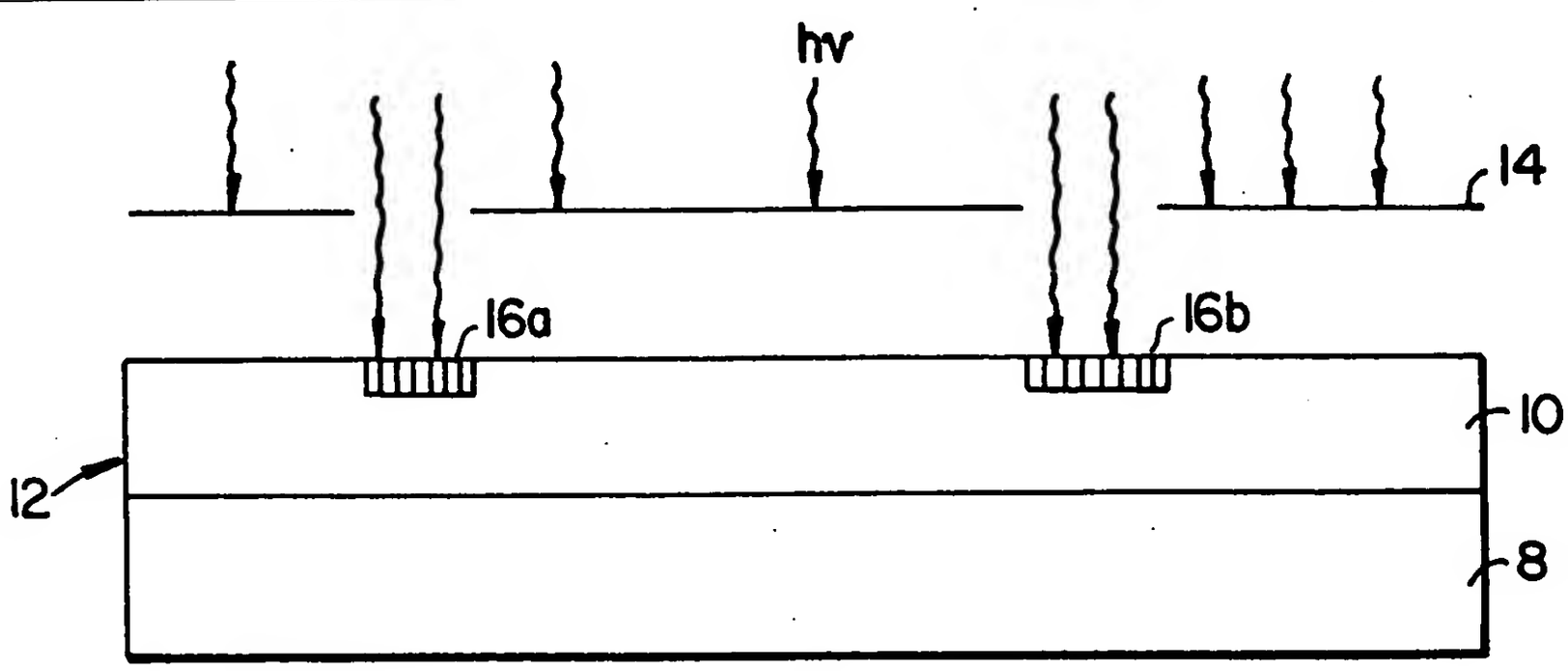


FIG. 2.

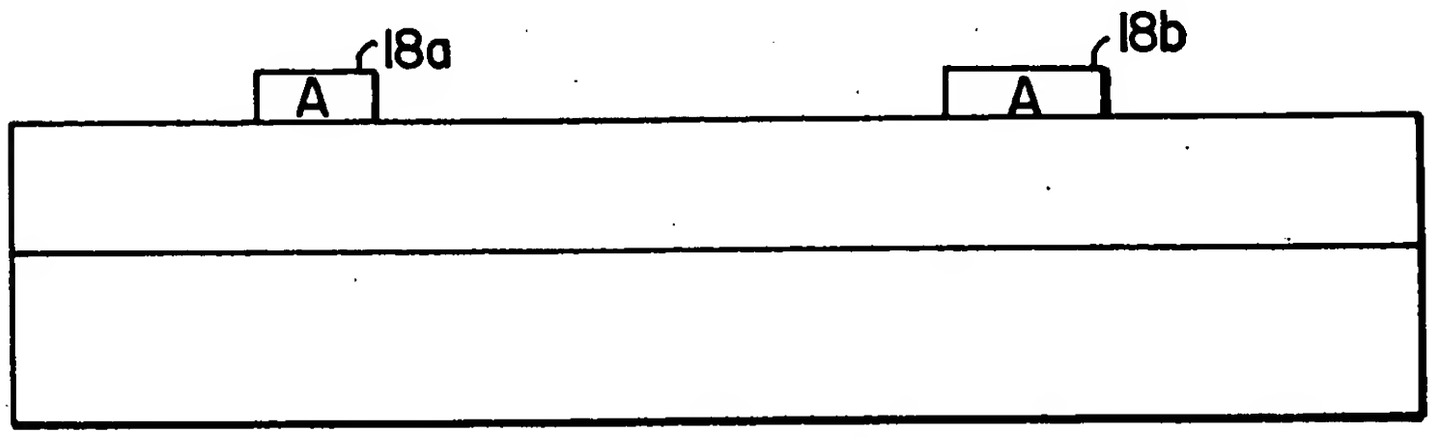


FIG. 3.

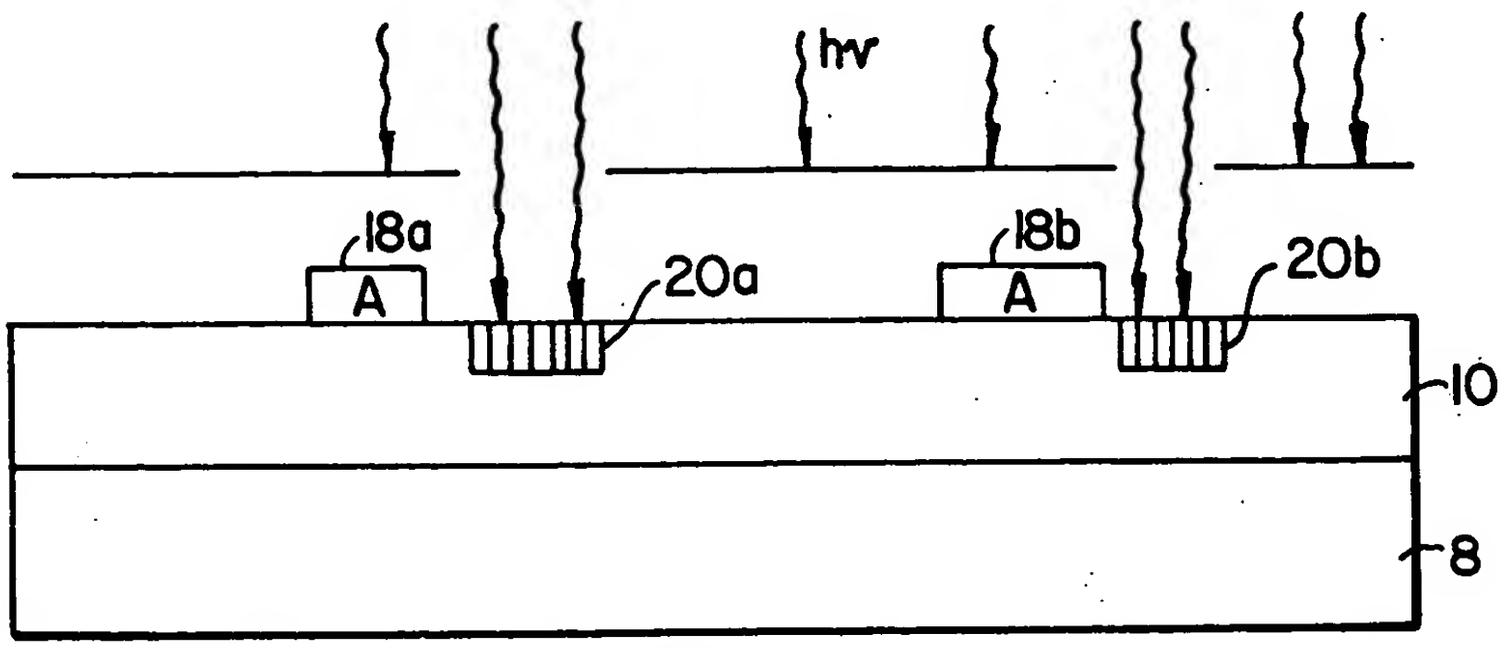


FIG. 4.

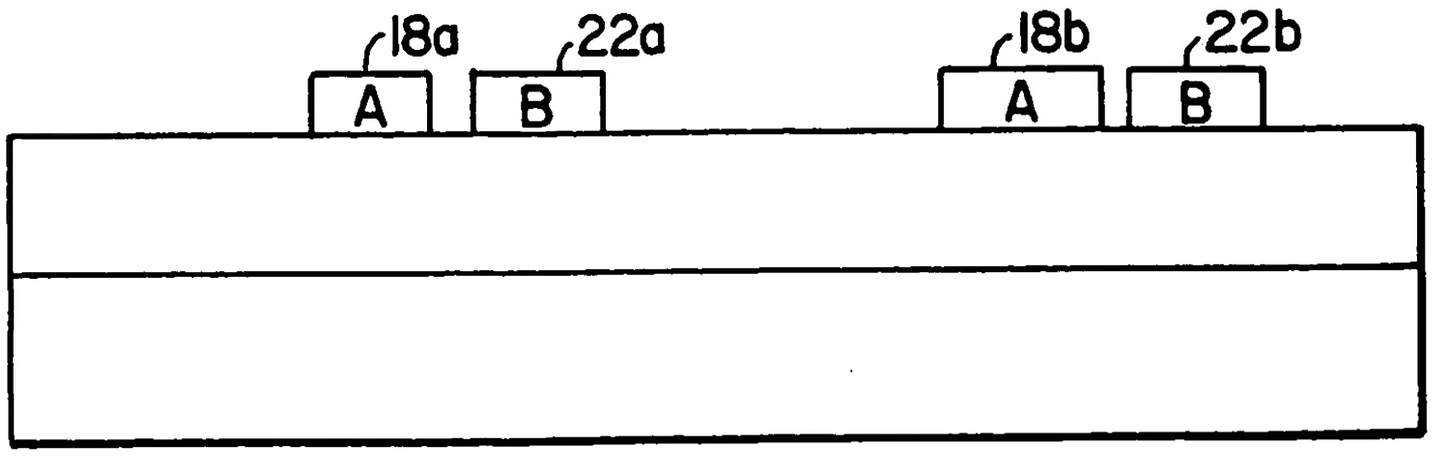


FIG. 5.

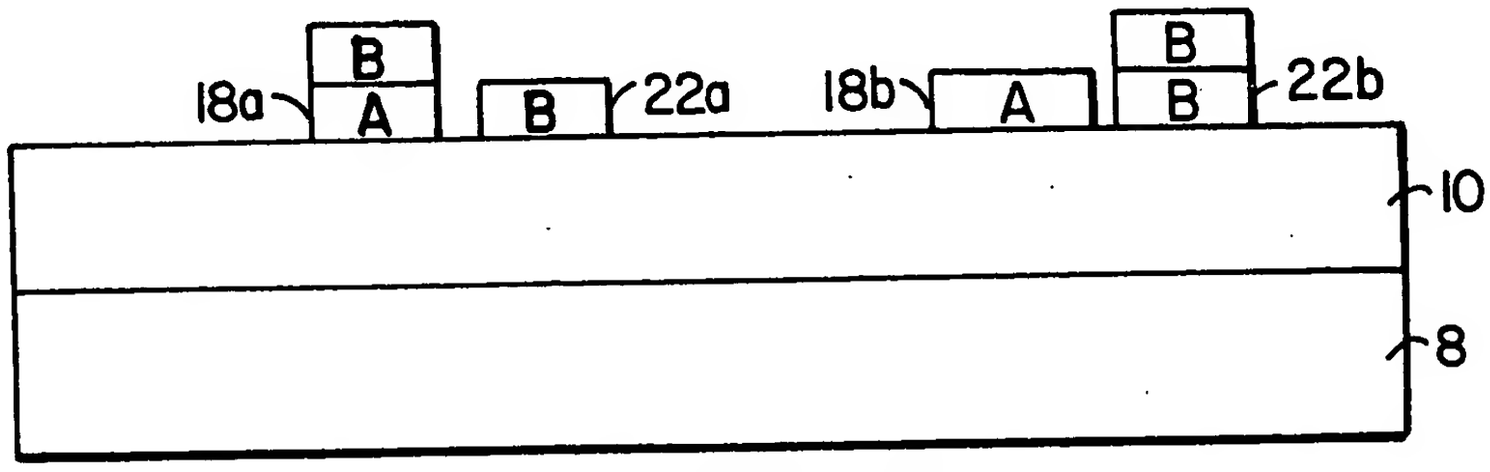


FIG. 6.

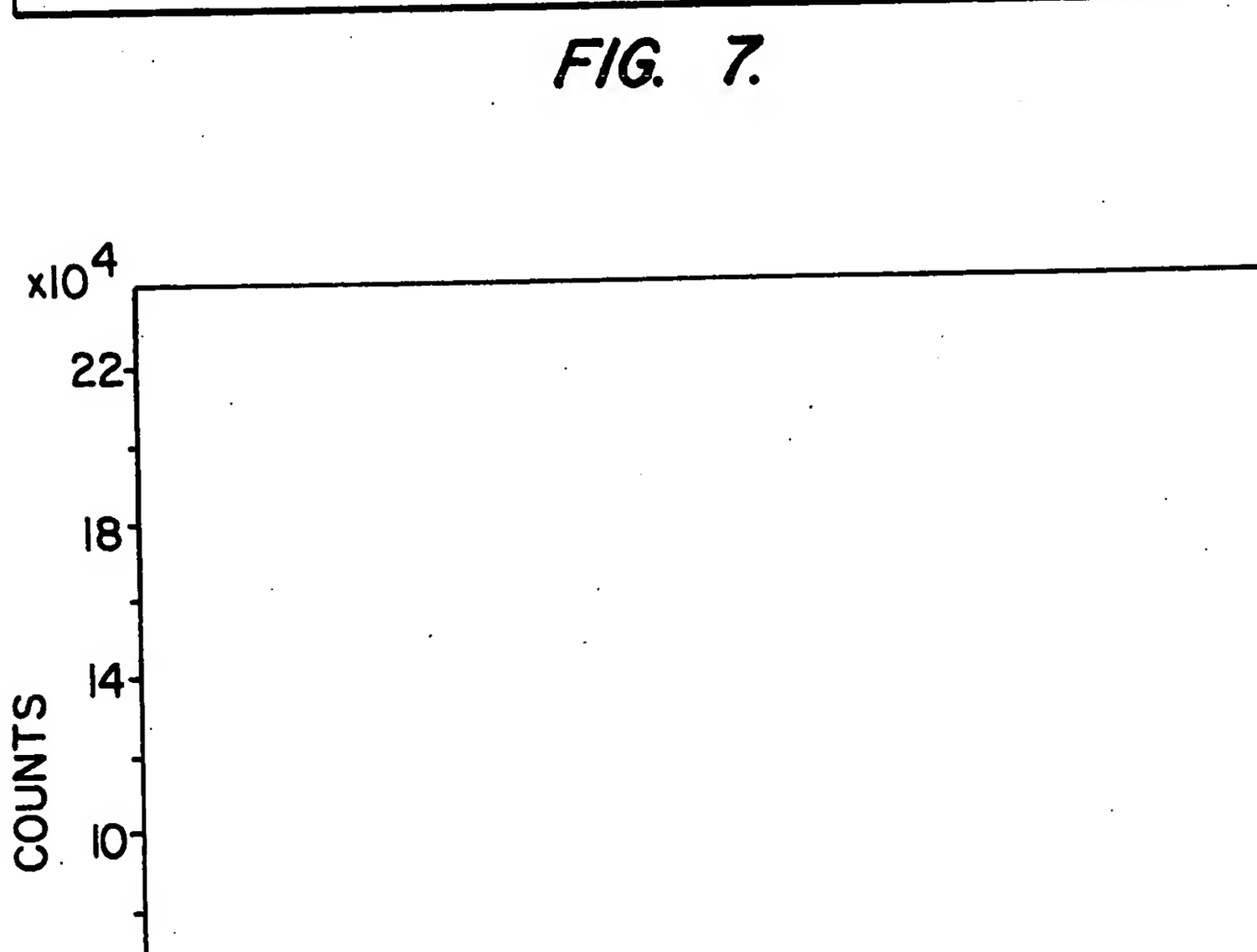


FIG. 7.

FIG. 8A.

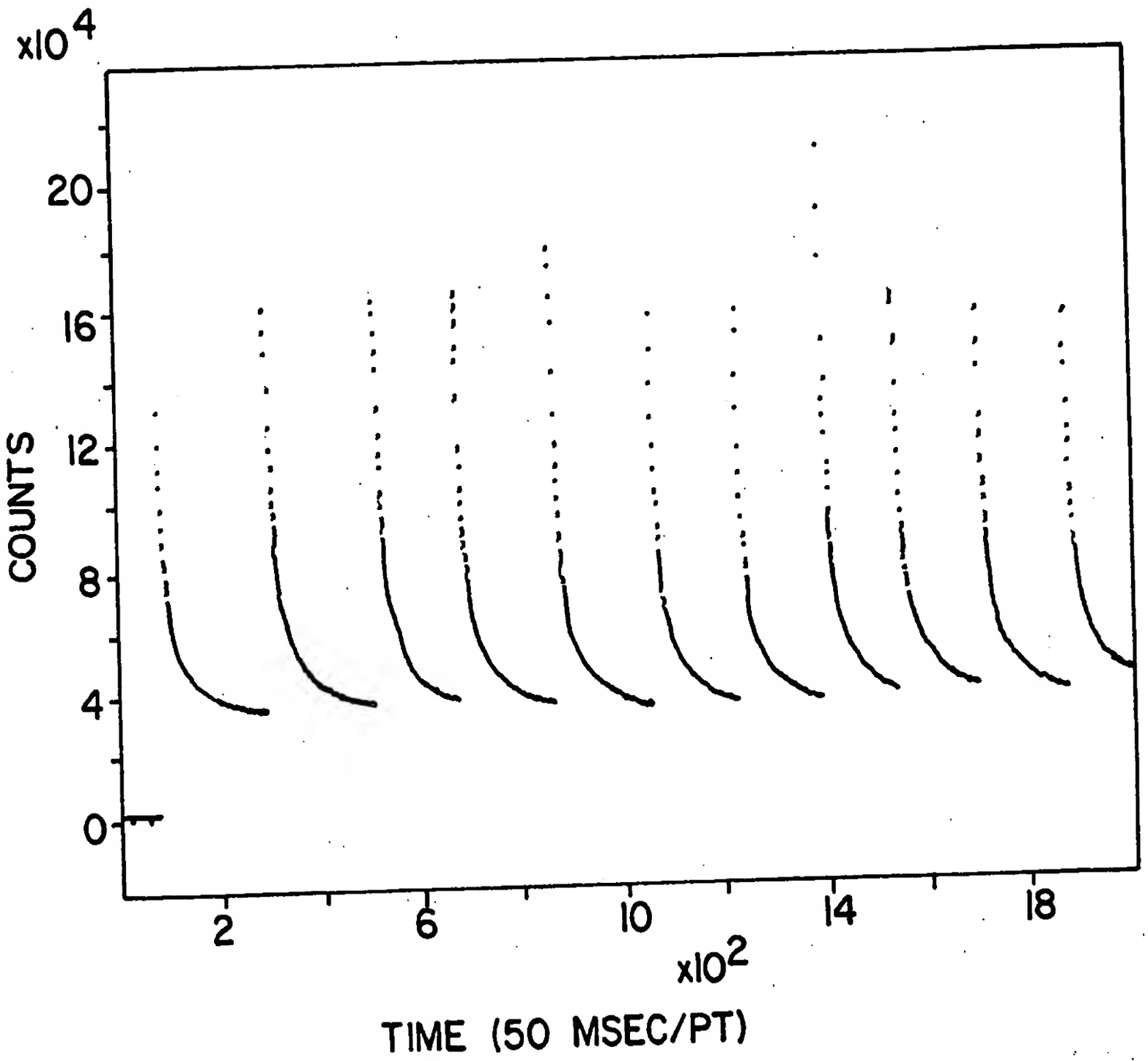
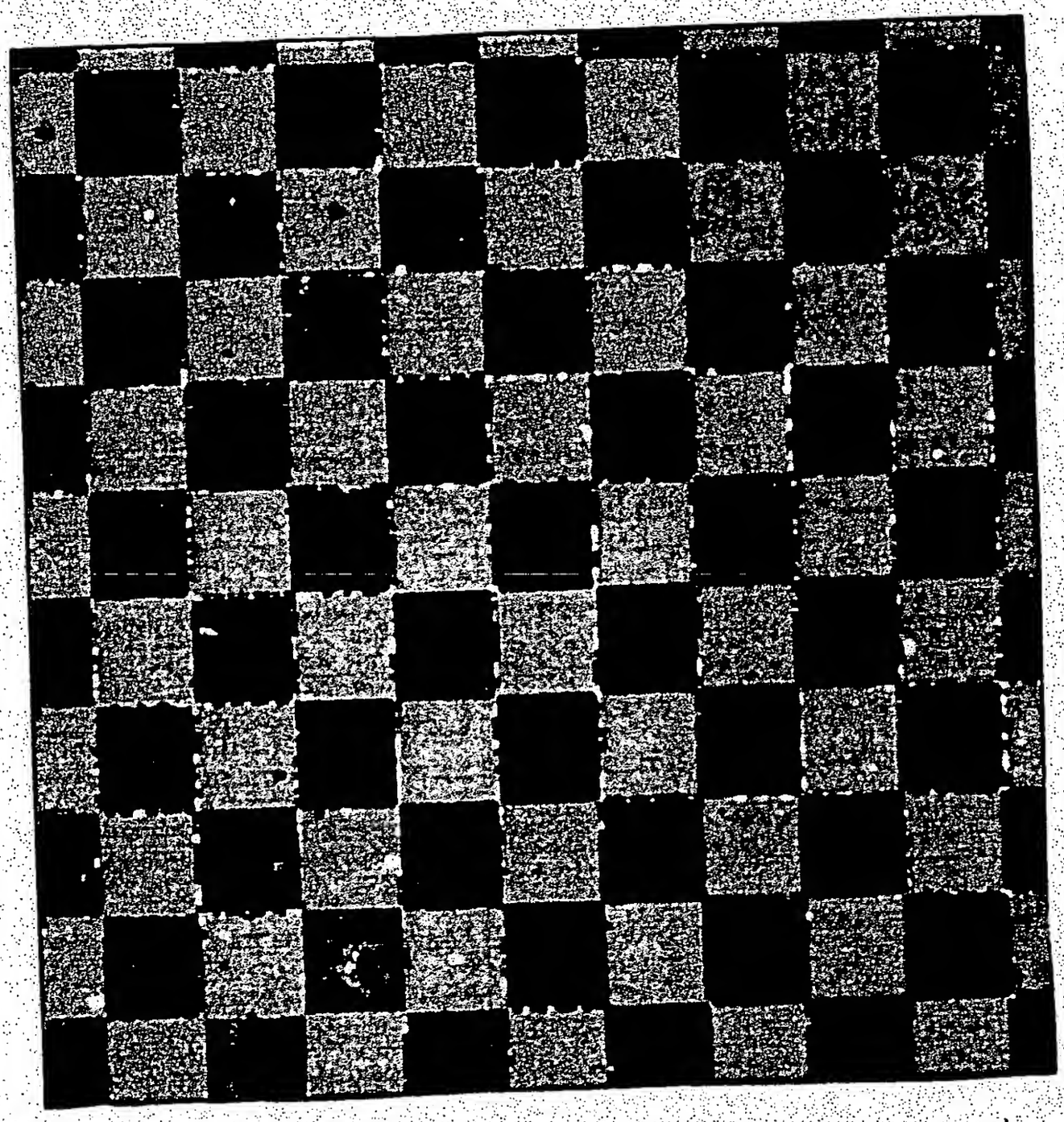


FIG. 8B.



1023027
728188.3
322785.5
300672.6
285930.7
278559.7
271188.8
212221.1
197479.2
182737.3
138511.5

MEAN 285930.7
VAR 2.173242E+10
σ 147419.2

FIG._9A.

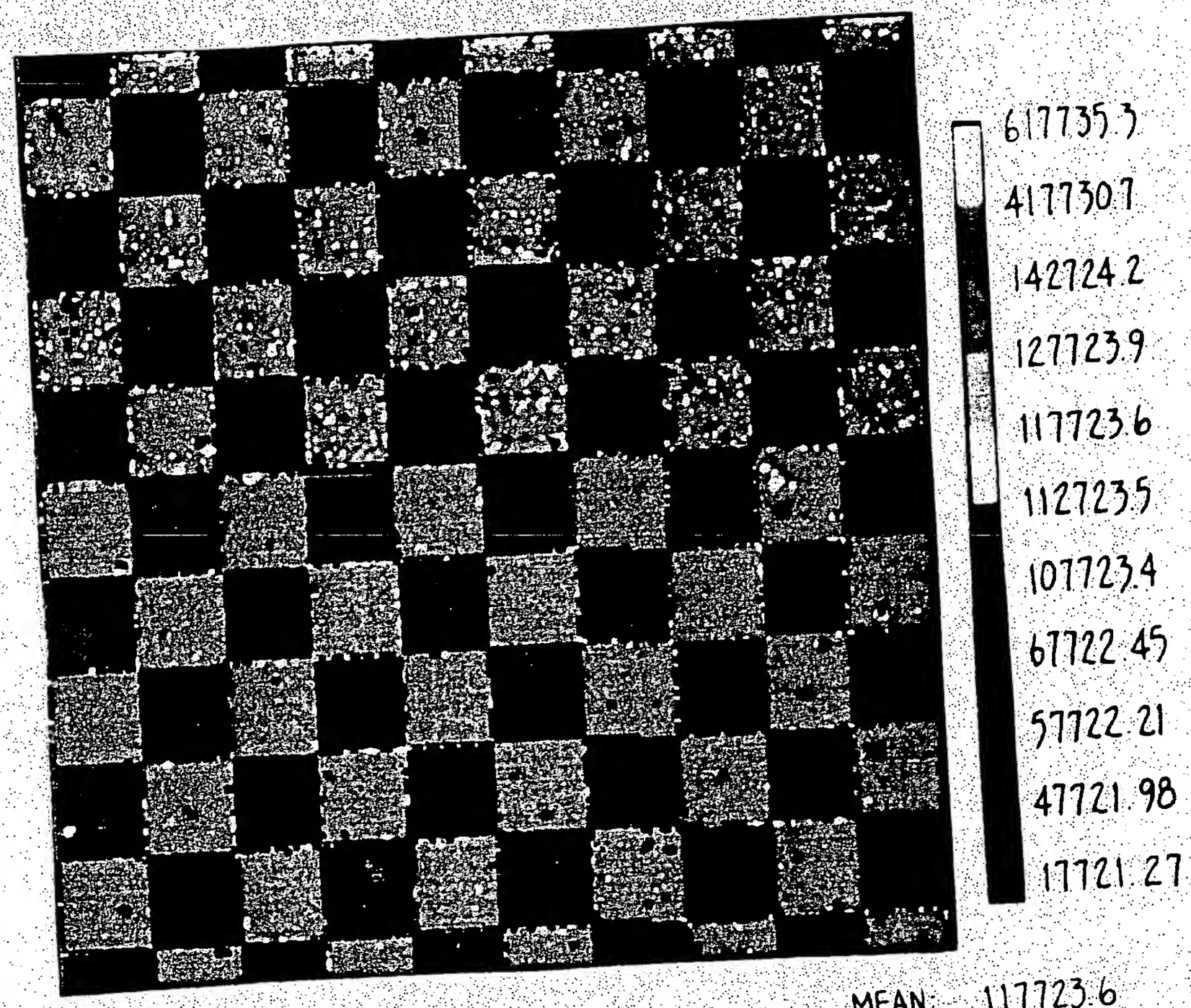

617735.3
4177307
142724.2
127723.9
117723.6
1127235
107723.4
67722.45
57722.21
47721.98
17721.27
MEAN 117723.6
VAR 1.000047E+10
σ 100002.3

FIG._9B.

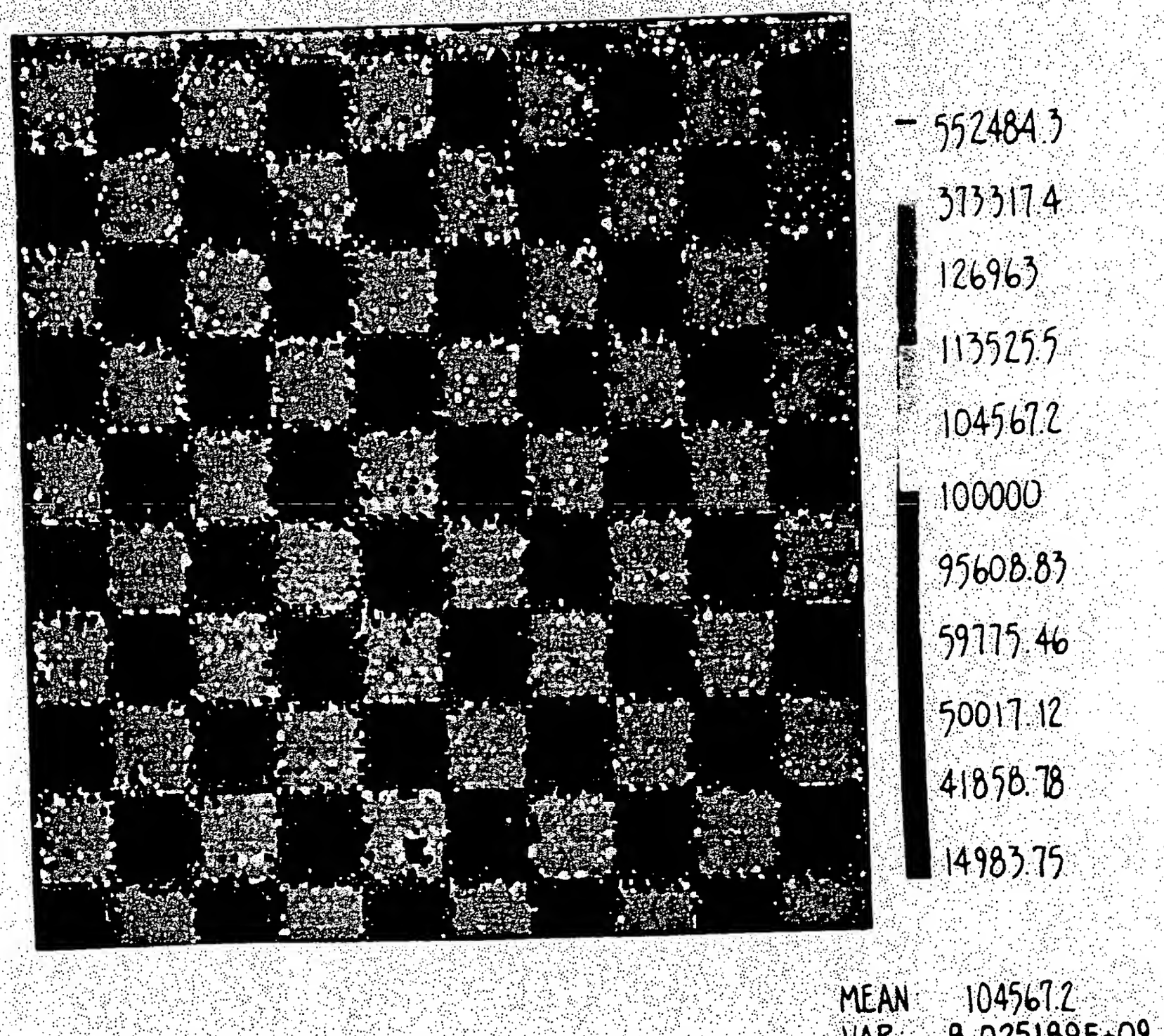

552484.3
373317.4
126963
113525.5
104567.2
100000
95608.83
59775.46
50017.12
41858.78
14983.75
MEAN 104567.2
VAR 8.025189E+09
σ 89583.42

FIG._9C.

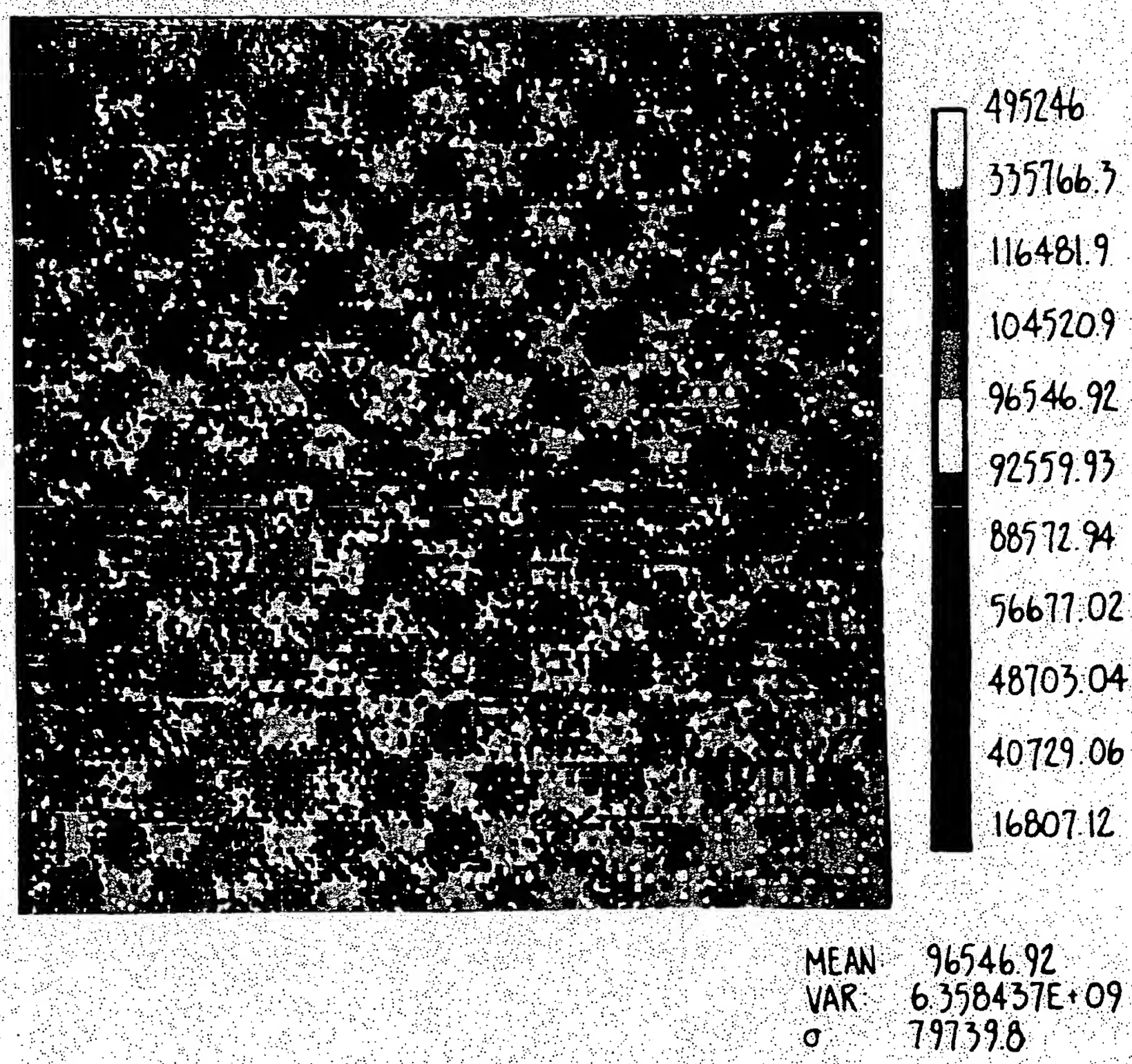

495246
335766.3
116481.9
104520.9
96546.92
92559.93
88572.94
56677.02
48703.04
40729.06
16807.12
MEAN 96546.92
VAR 6.358437E+09
σ 79739.8

FIG._9D.

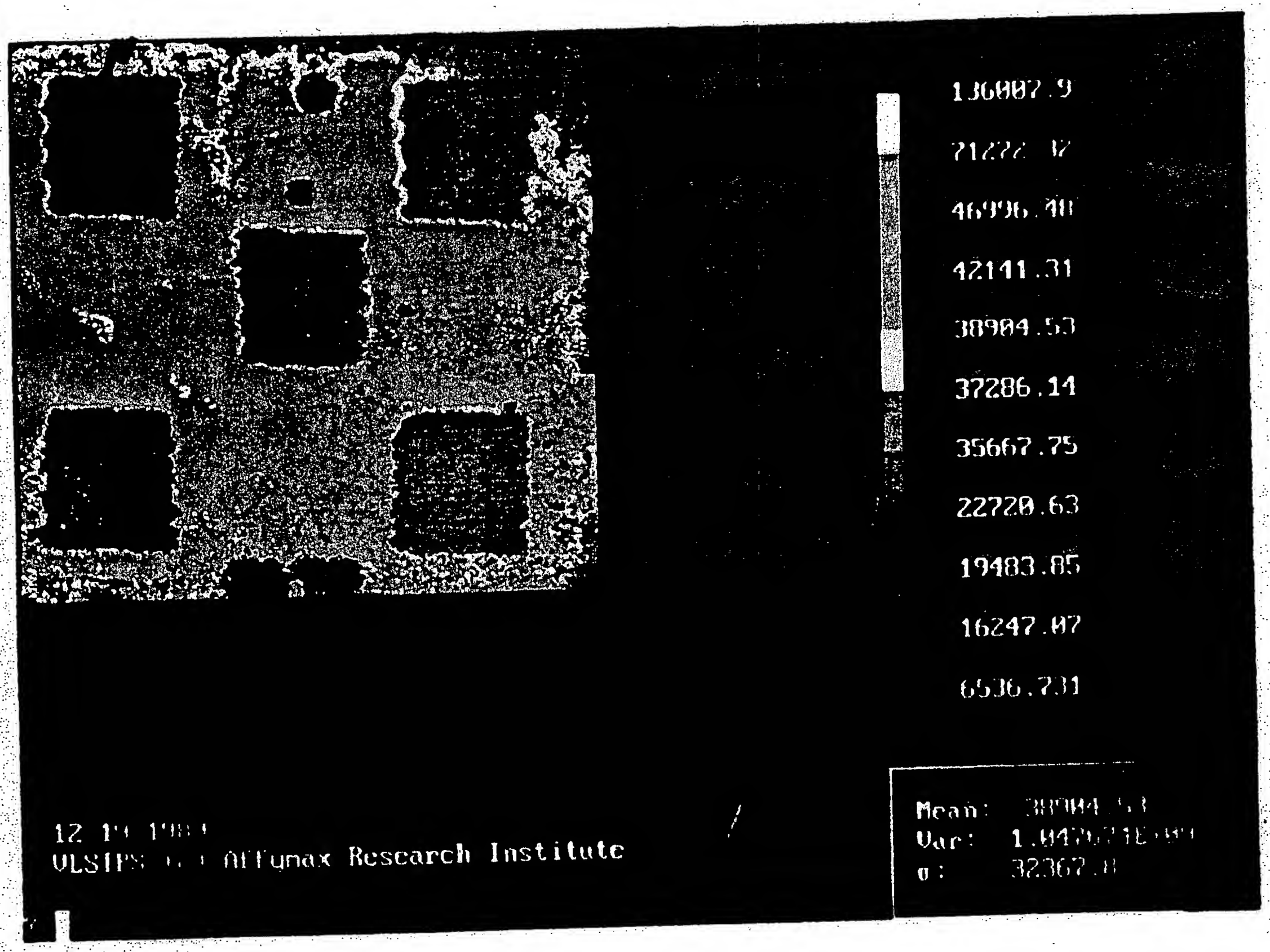

136007.9
71222.97
46996.48
42141.31
38904.53
37286.14
35667.75
22720.63
19483.85
16247.07
6536.731
Mean:
Var:
σ:
12
VLSIPS
Alfymax Research Institute

FIG. 10.

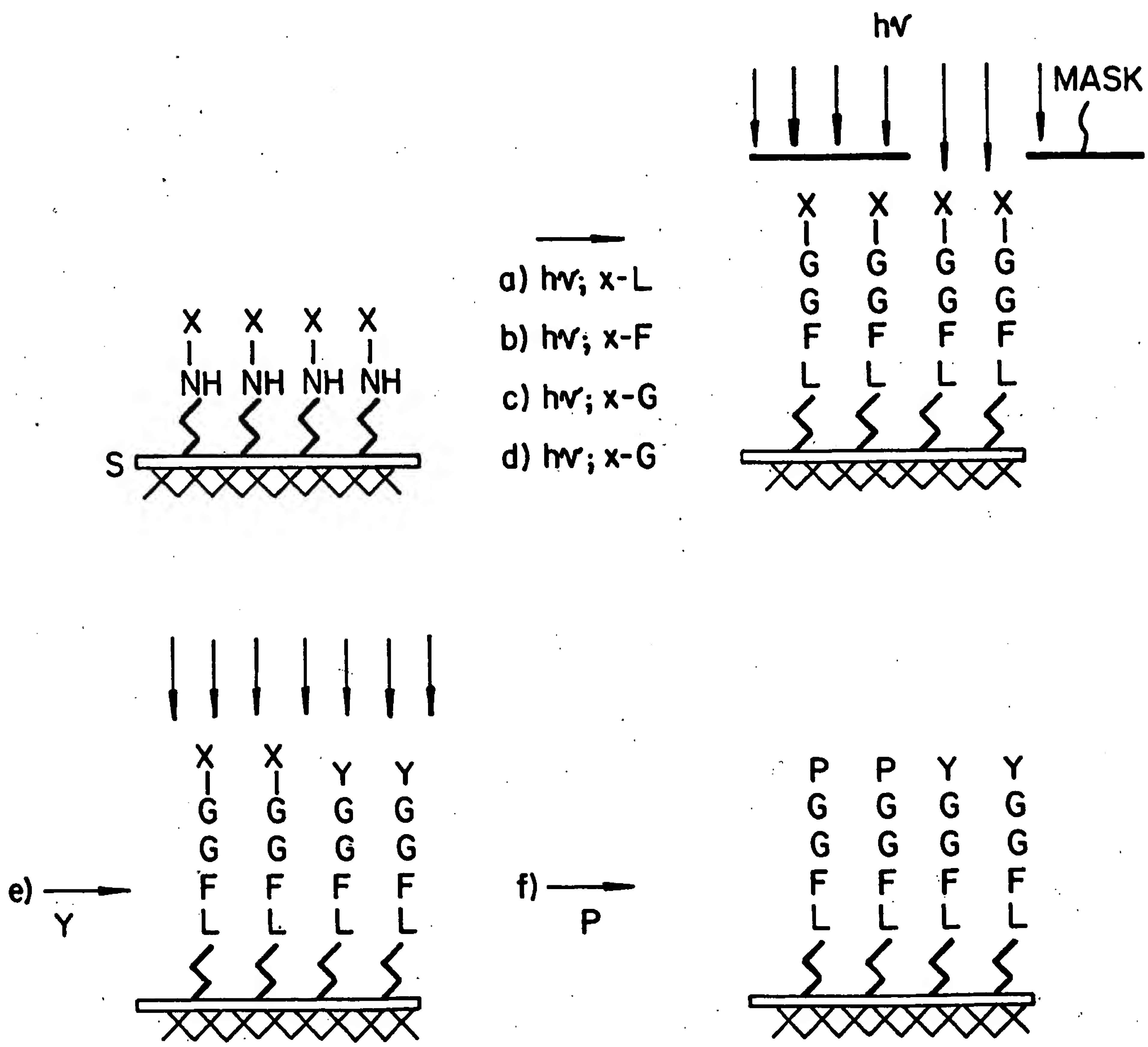

hv
MASK
S
X X X X
NH NH NH NH
a) hv; x-L
b) hv; x-F
c) hv; x-G
d) hv; x-G
X X X X
G G G G
G G G G
F F F F
L L L L
e) Y
X X Y Y
G G G G
G G G G
F F F F
L L L L
f) P
P P Y Y
G G G G
G G G G
F F F F
L L L L

FIG. 11.

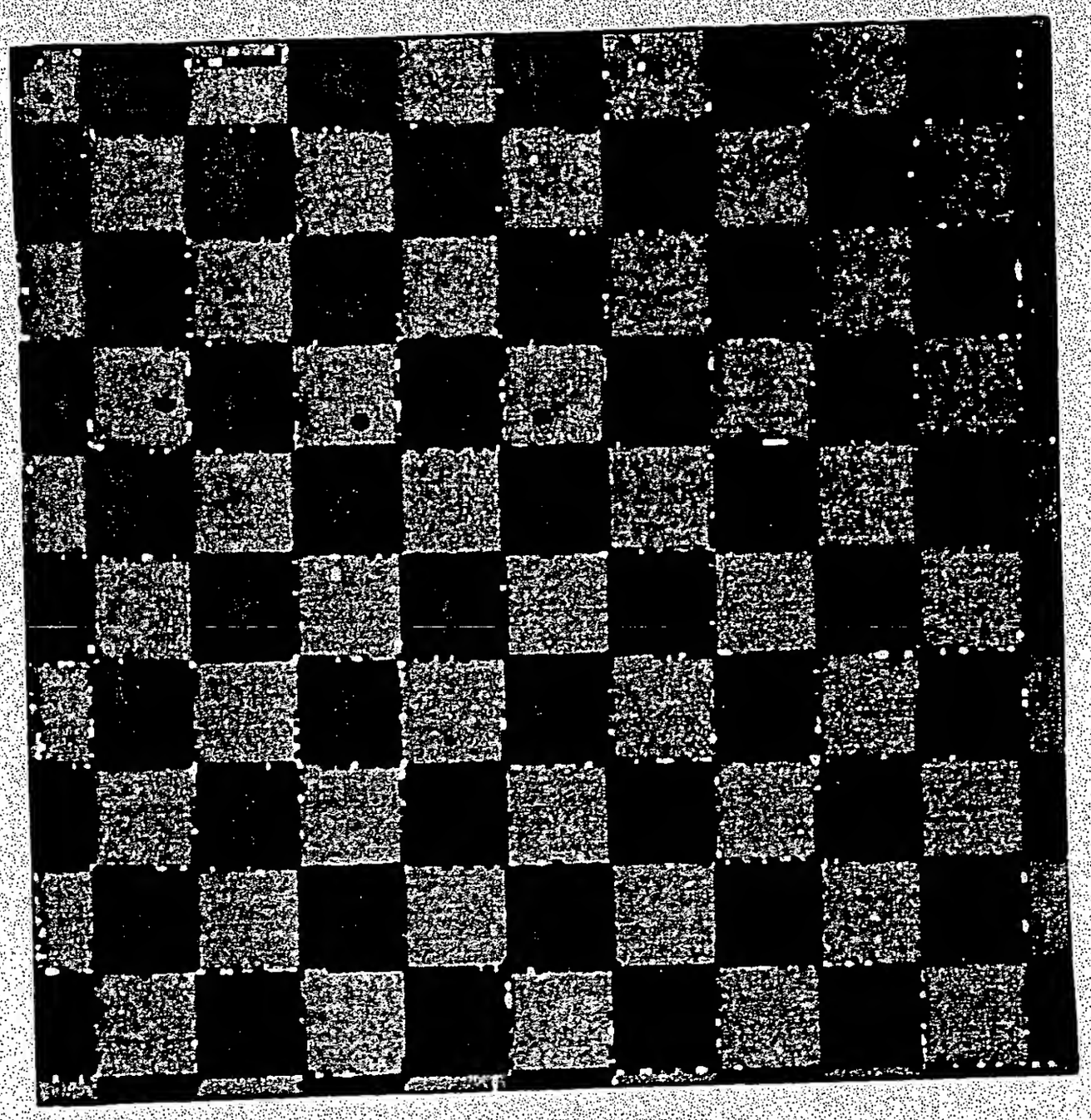

636588
4285838
1425779
1269775
1165773
1113772
1061771
6457625
5417603
4377582
1257518
MEAN: 1165773
VAR: 1.081645E+10
σ: 1040021

FIG._12.

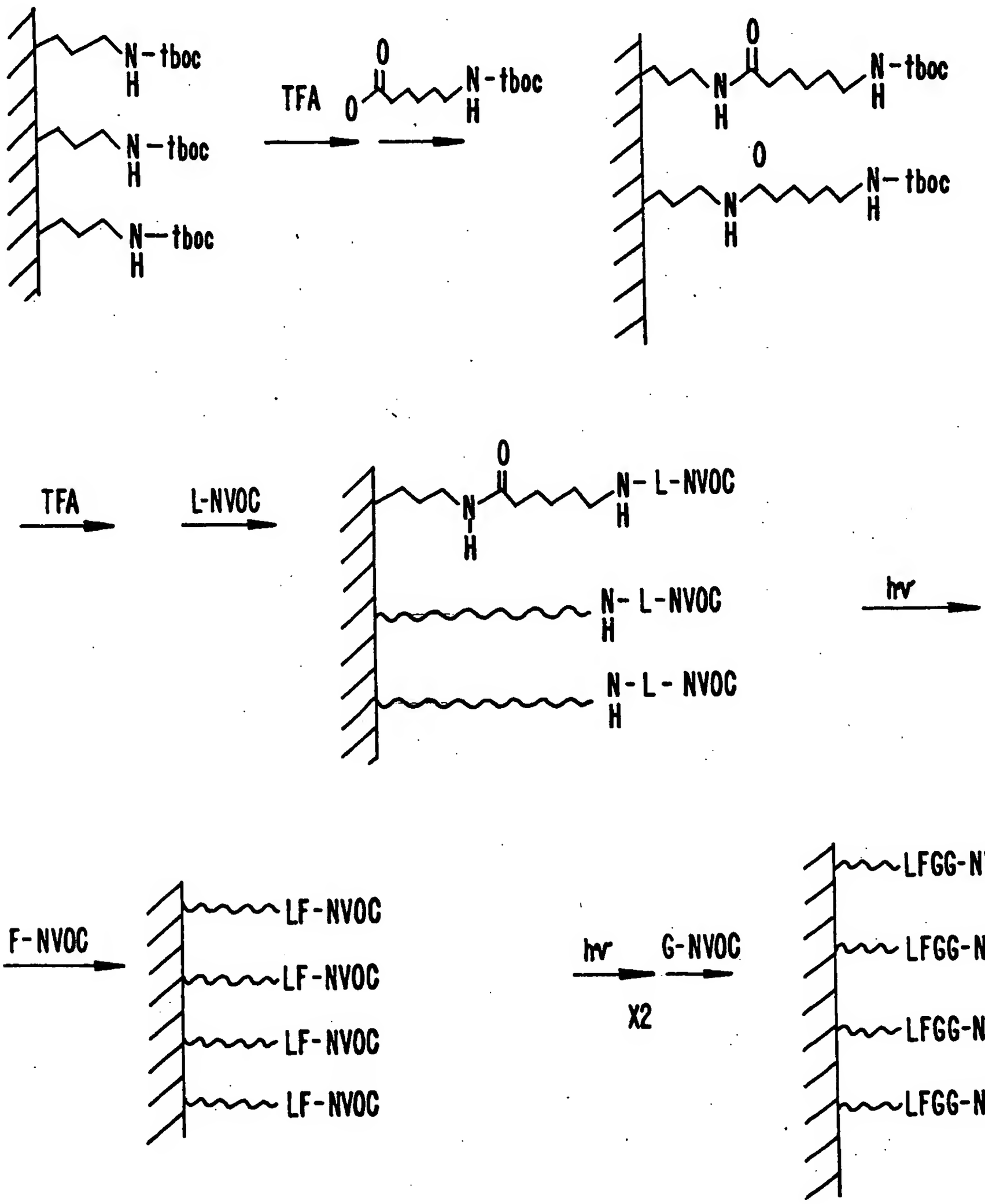


FIG. 13A.

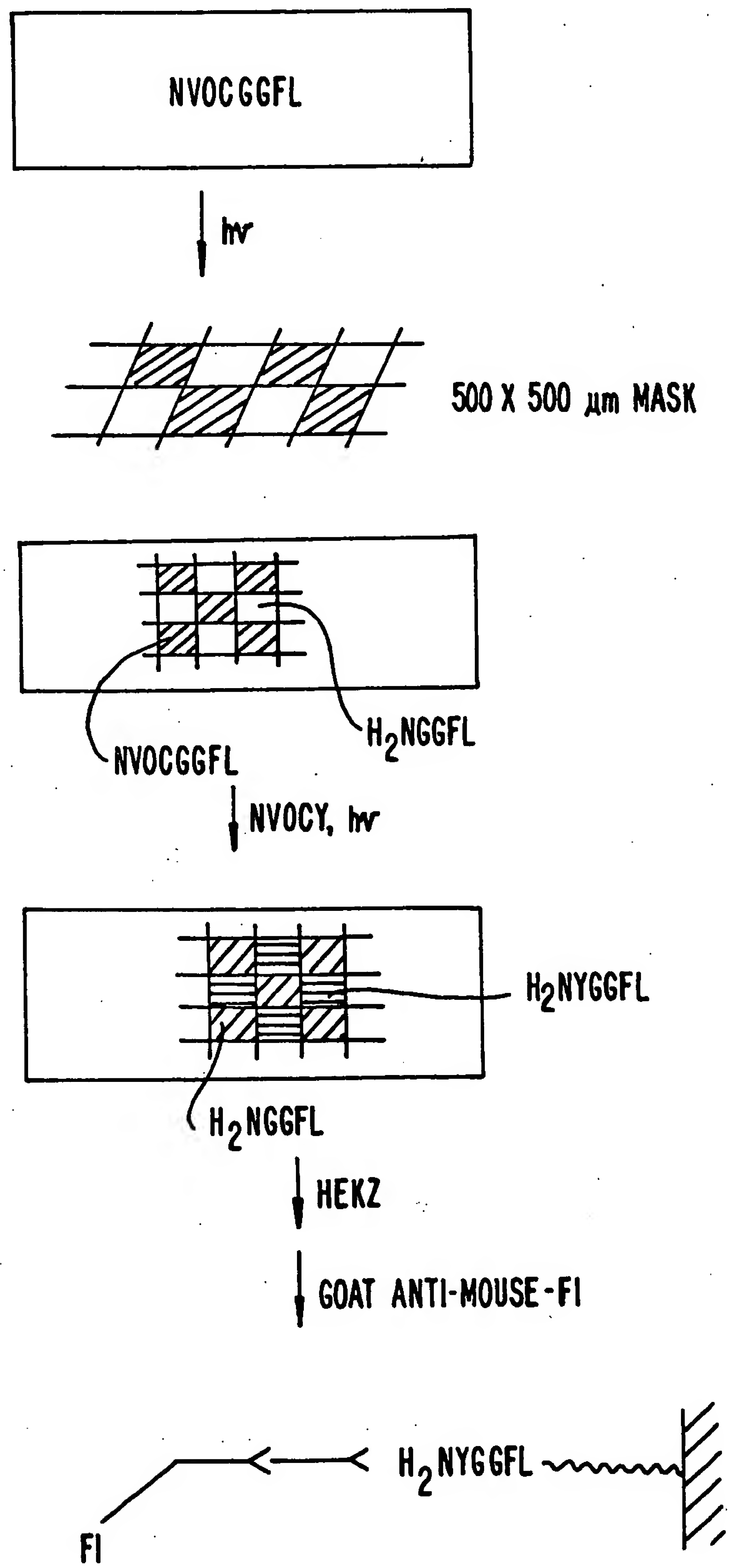

NVOCGGFL
hv
500 X 500 µm MASK
NVOCGGFL
H_2NGGFL
NVOCY, hv
H_2NYGGFL
H_2NGGFL
HEKZ
GOAT ANTI-MOUSE-Fl
H_2NYGGFL
Fl

FIG. 13B.

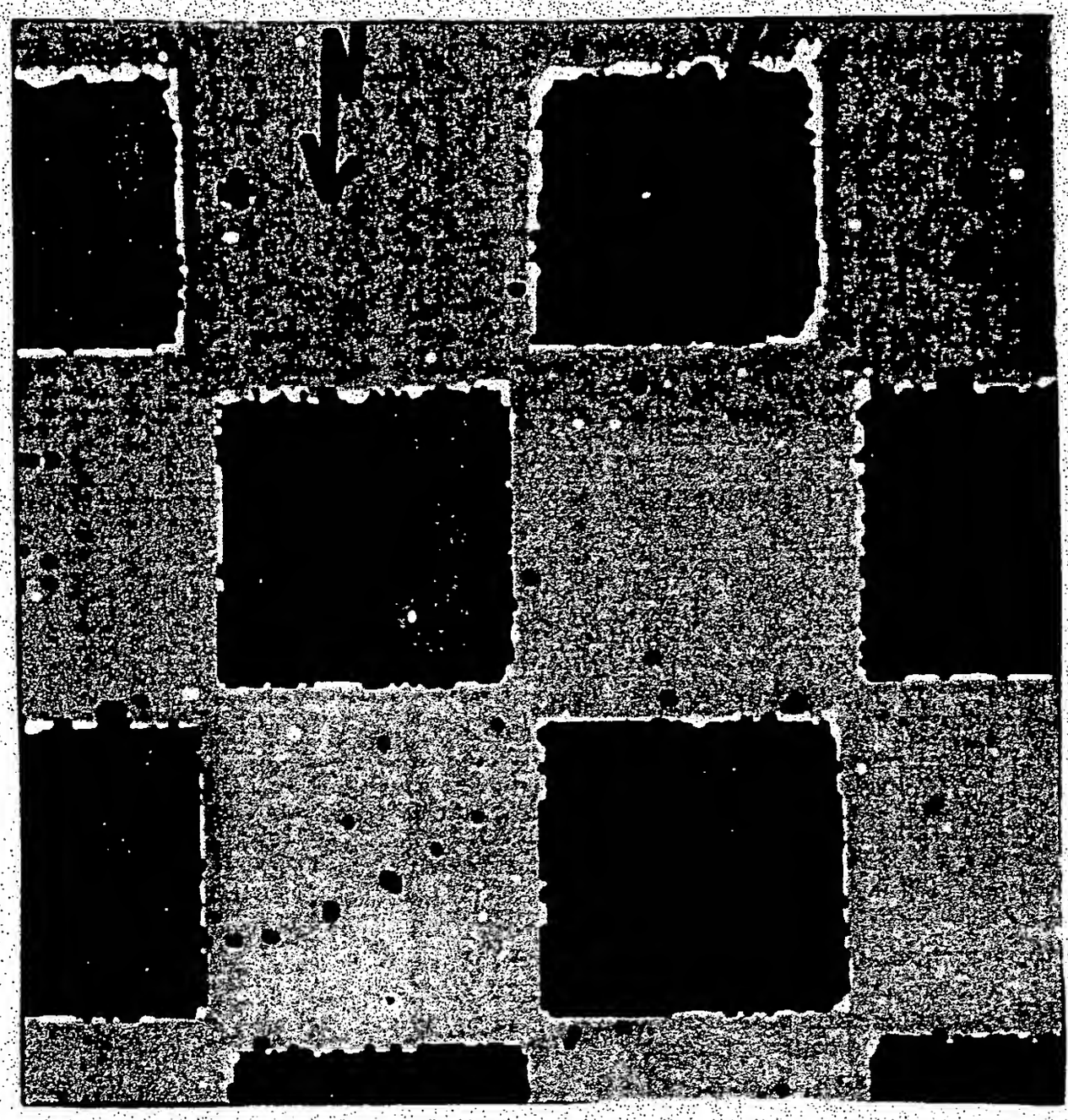

50780.26
34141.69
30813.97
28595.5
27486.26
26377.02
17503.12
11956.92
6410.734
-15774.03
37958.79
MEAN 28595.5
VAR 4.921637E+08
σ 22184.76

FIG._13C.

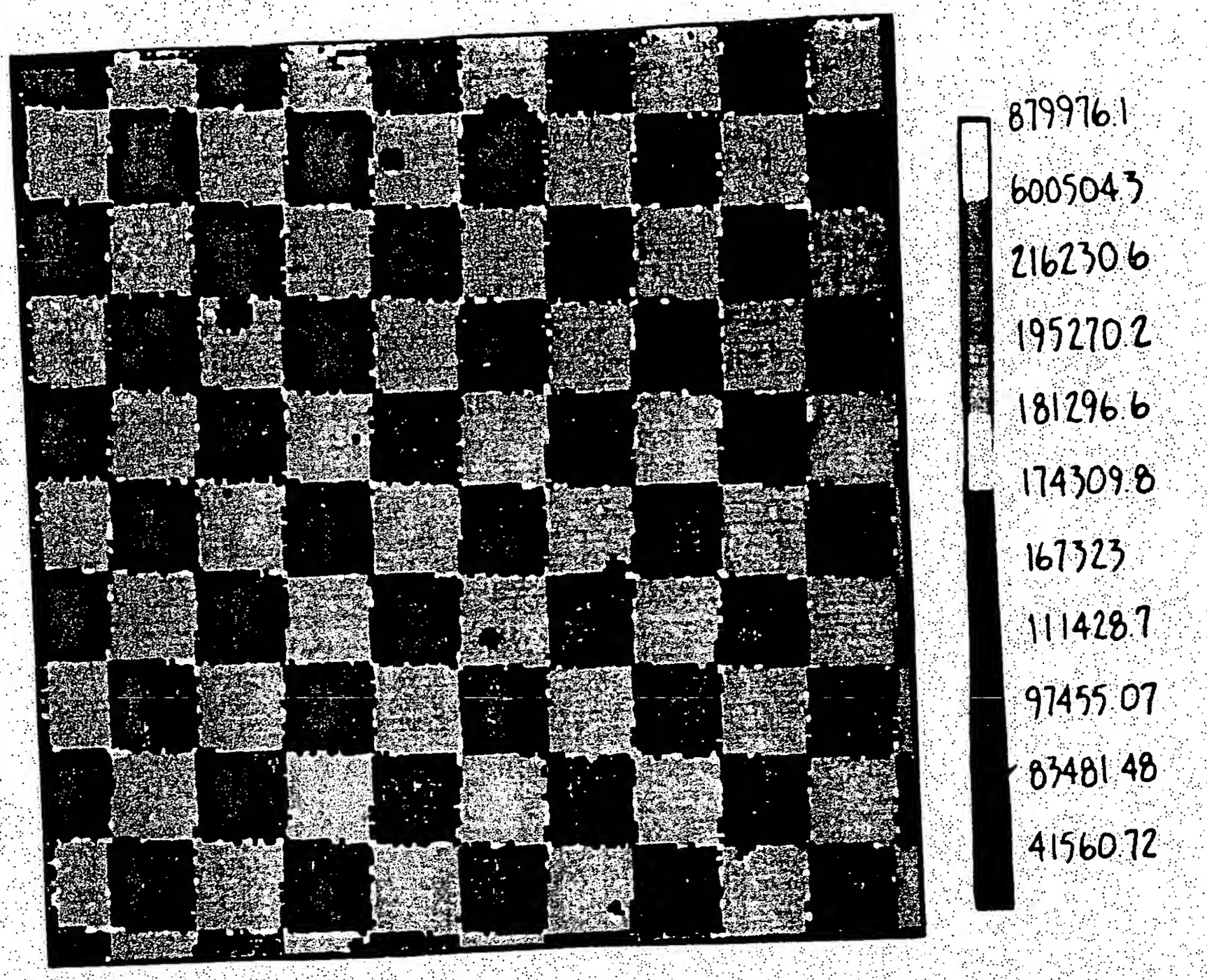

879976.1
600504.3
216230.6
195270.2
181296.6
174309.8
167323
111428.7
97455.07
83481.48
41560.72
MEAN 1812966
VAR 1.952612E+10
σ 139735.9

FIG._13D.

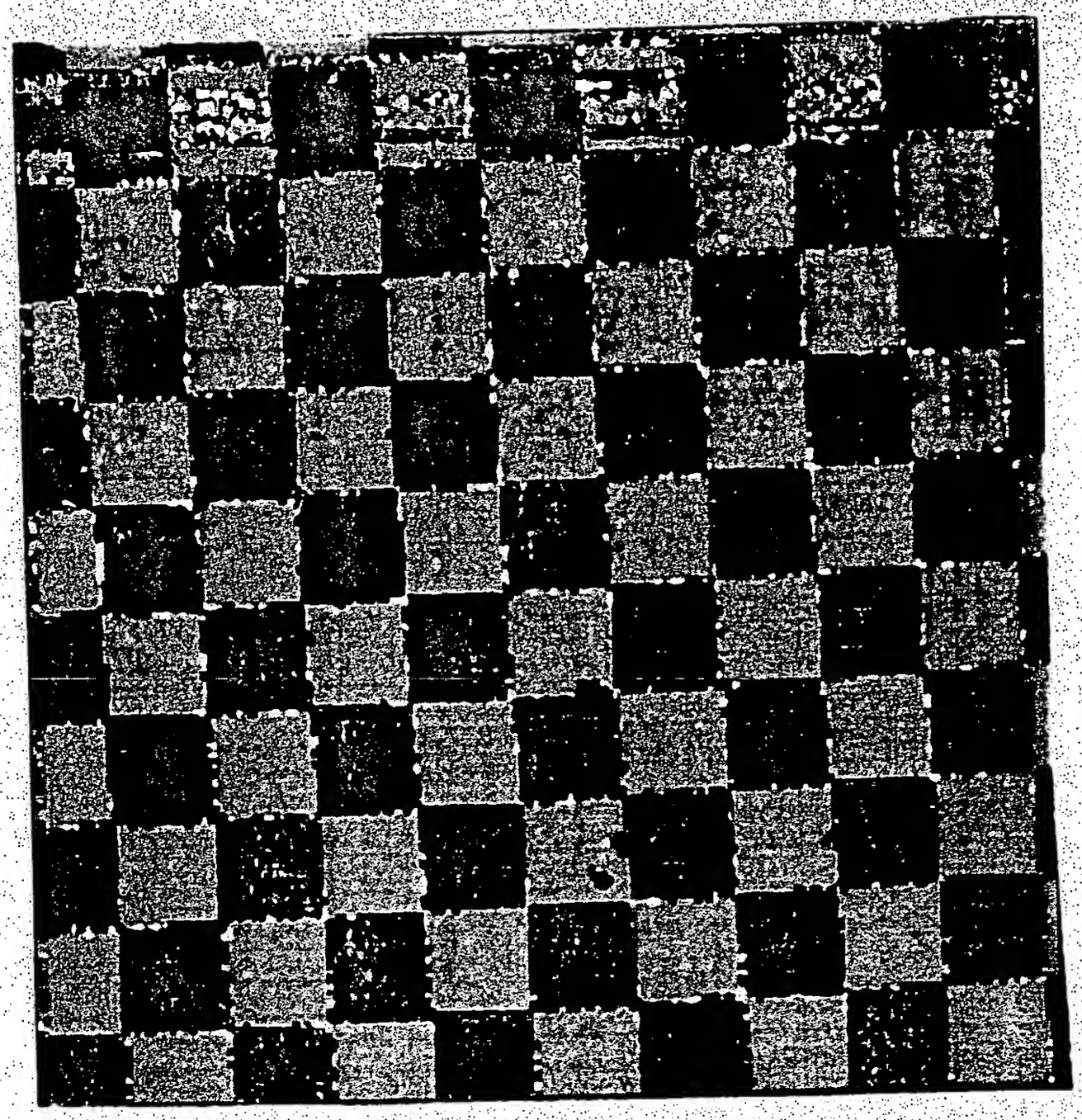

6673483
453053
158397
1423249
1316101
1262527
1208953
7803629
6732152
5660677
2446247
MEAN 1316101
VAR 1.148062E+10
σ 107147.6

FIG._14.

P	A	S	G	
LPGFL	LAGFL	LSGFL	LGGFL	L
FPGFL	FAGFL	FSGFL	FGGFL	F
WPGFL	WAGFL	WSGFL	WGGFL	W
YPGFL	YAGFL	YSGFL	YGGFL	Y

L SET

FIG. 15A.

p	a	s	G	
YpGFL	YaGFL	YsGFL	YGGFL	Y
fpGFL	faGFL	fsGFL	fGGFL	f
wpGFL	waGFL	wsGFL	wGGFL	w
ypGFL	yaGFL	ysGFL	yGGFL	y

D SET

FIG. 15B.

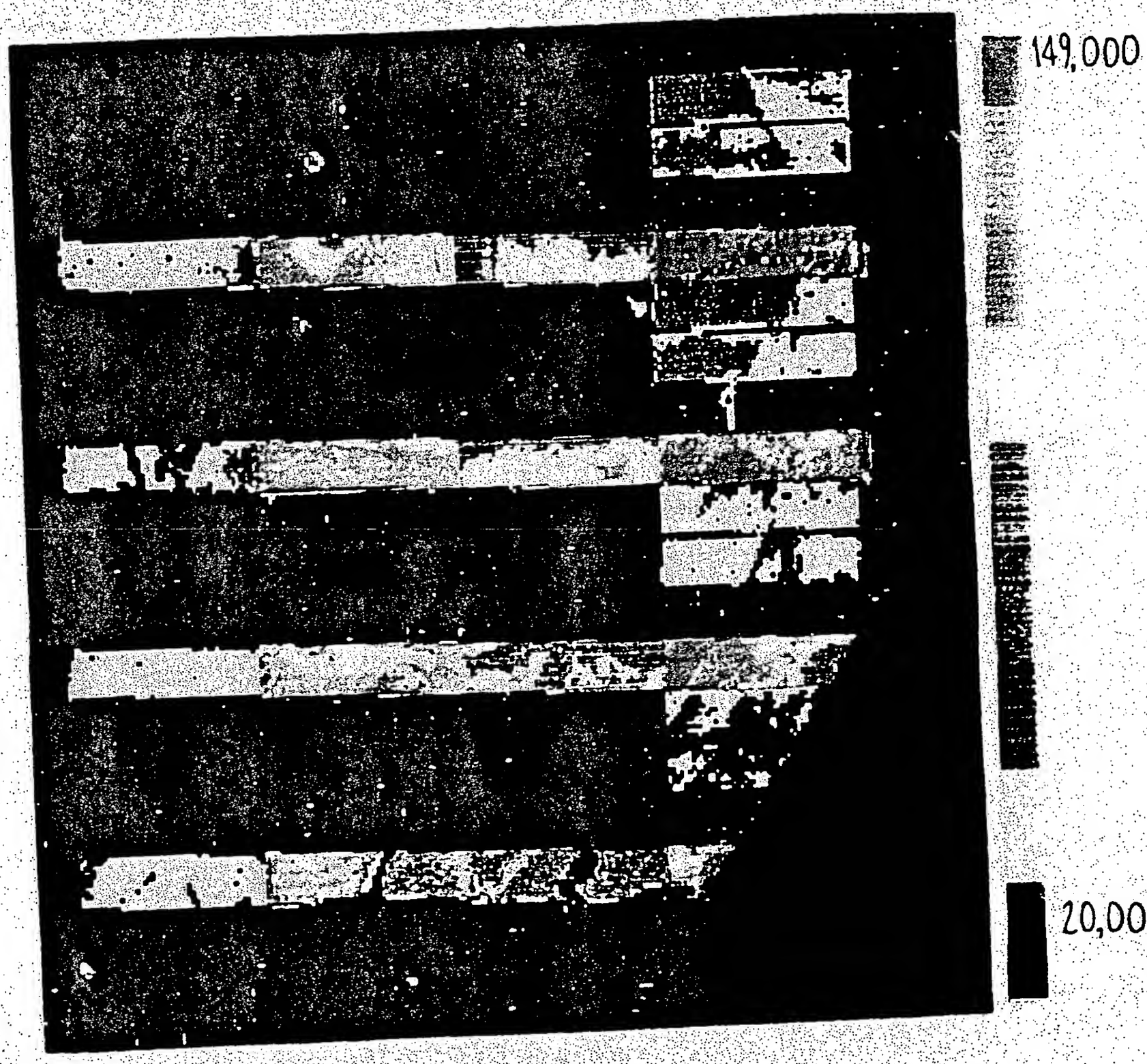


FIG._16.

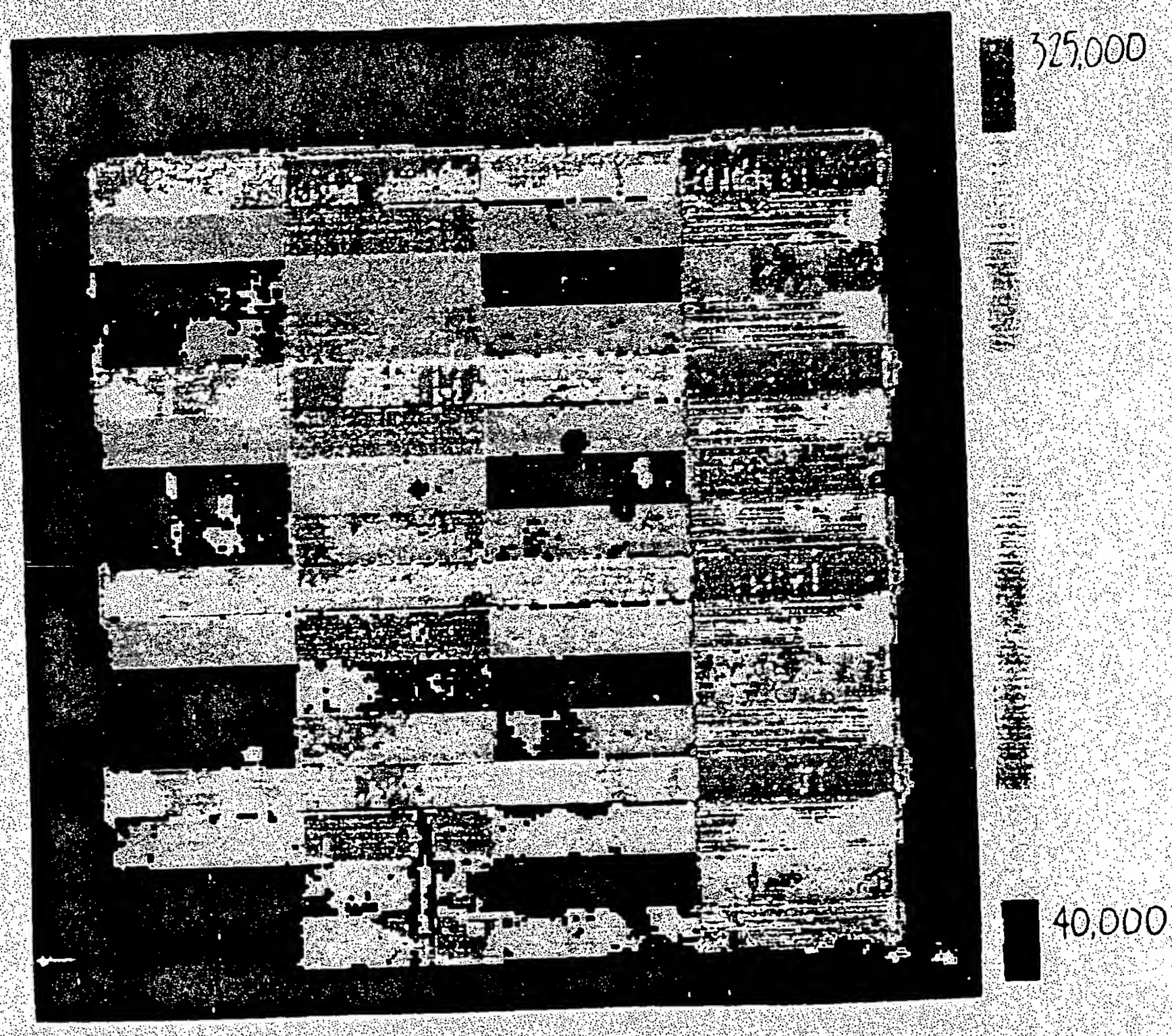


FIG._17.

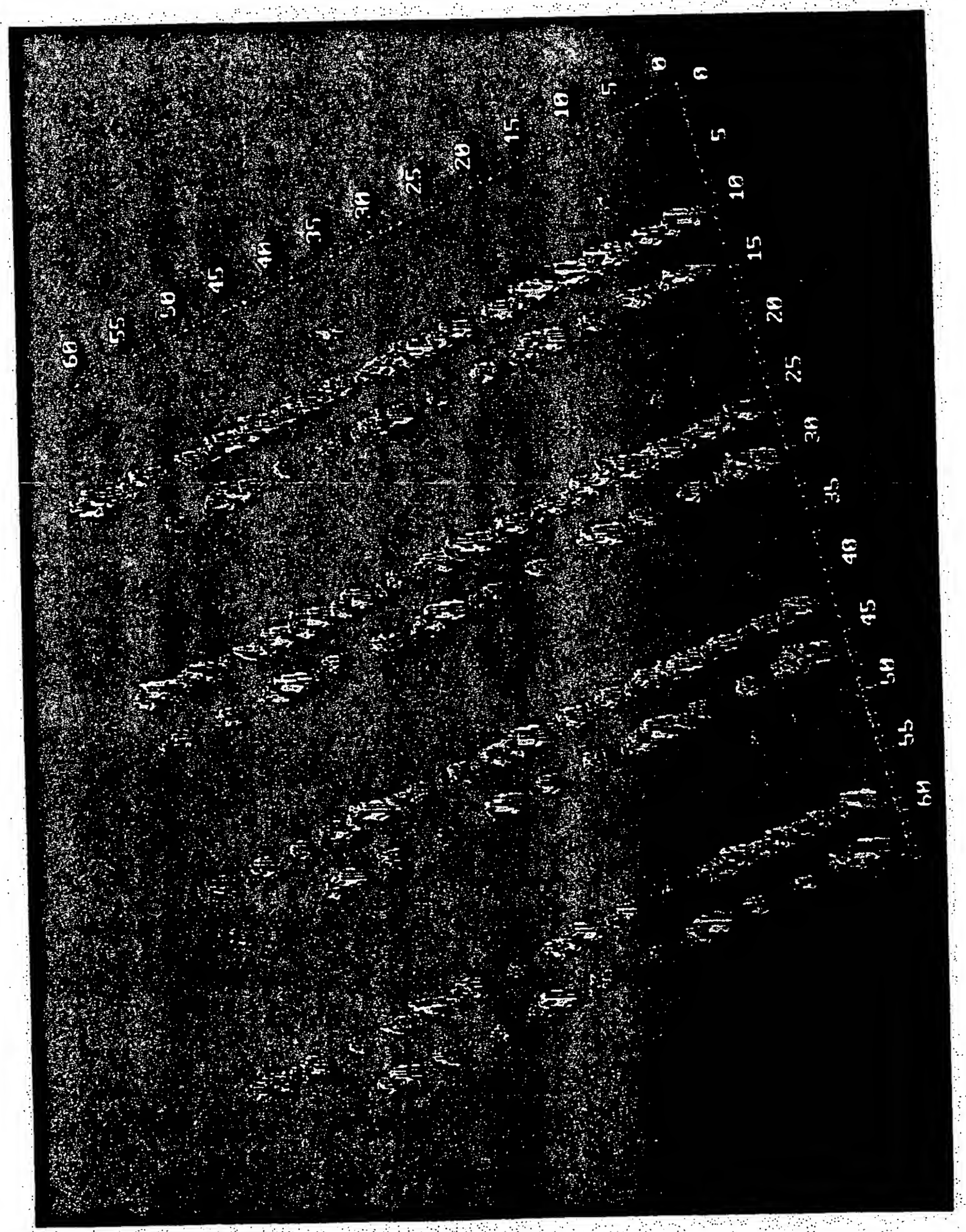


FIG. 18.

FIG. 19.

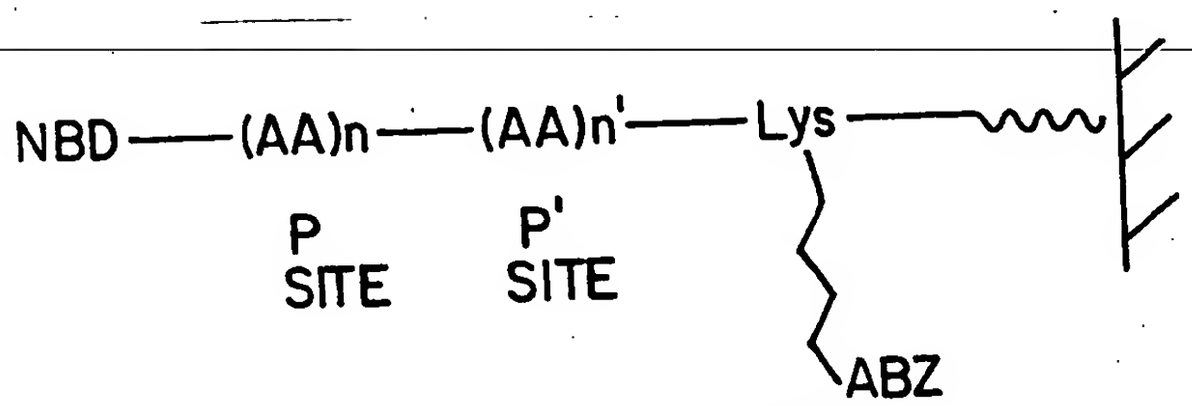


FIG. 20A.

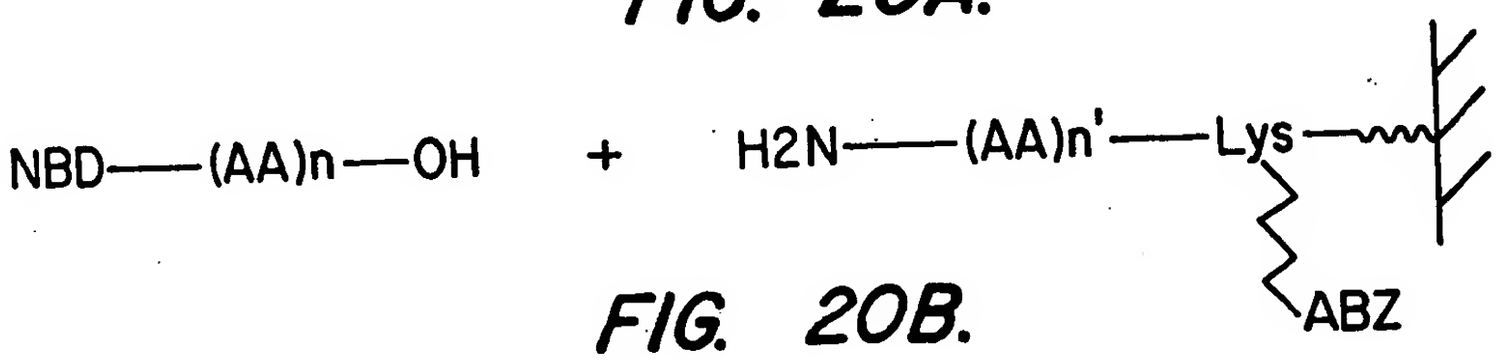


FIG. 20B.

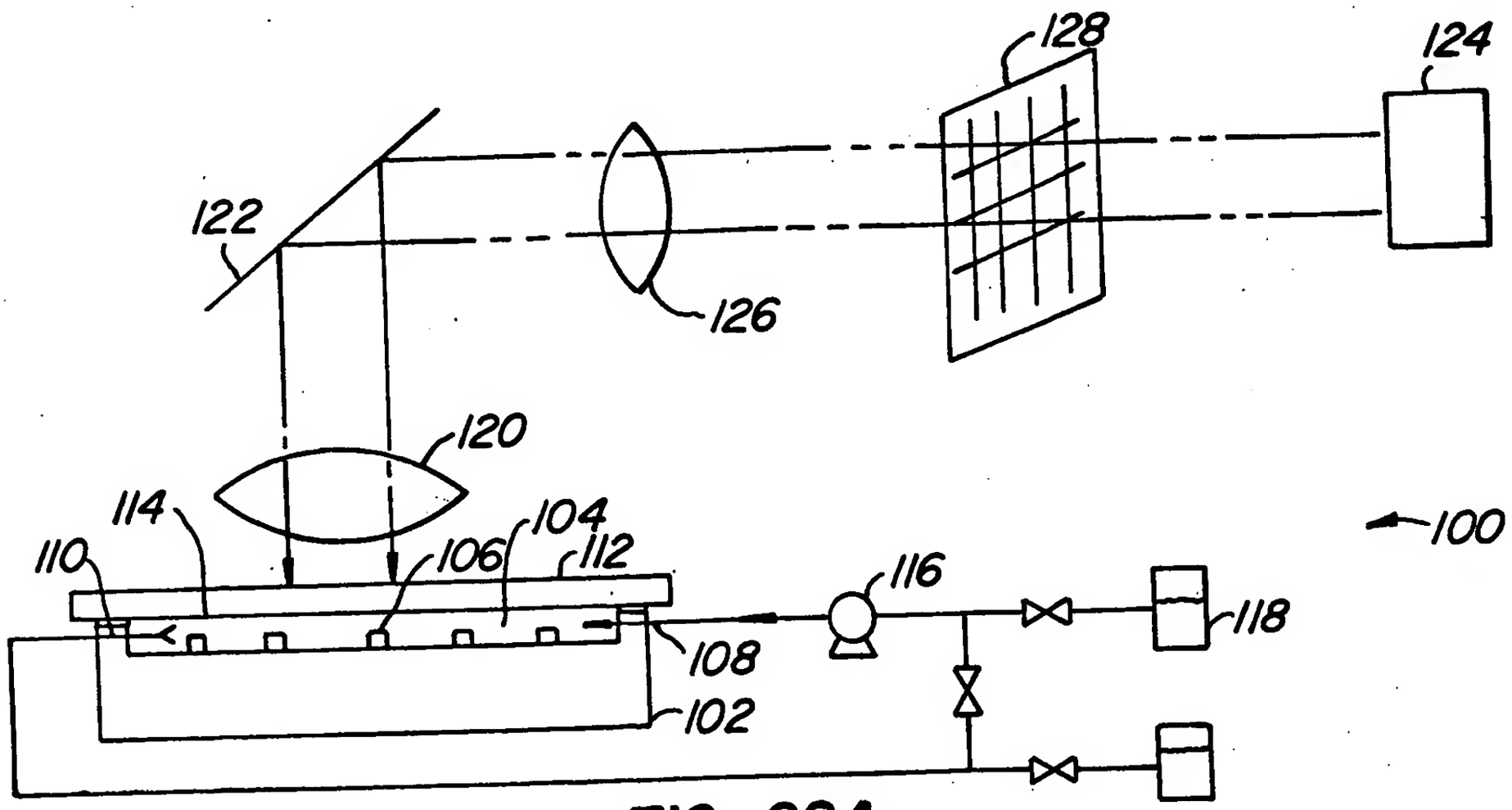


FIG. 22A.

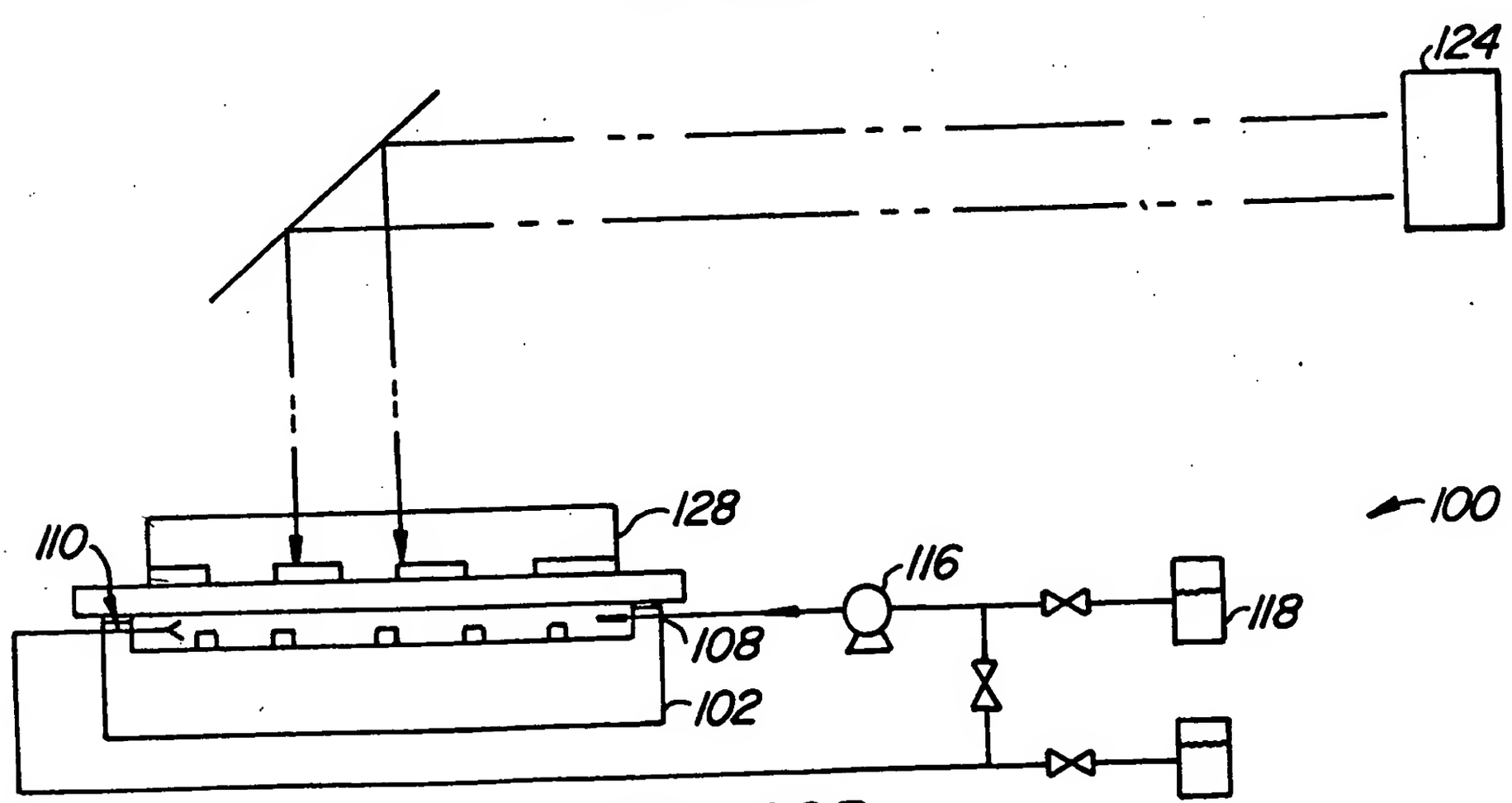


FIG. 22B.

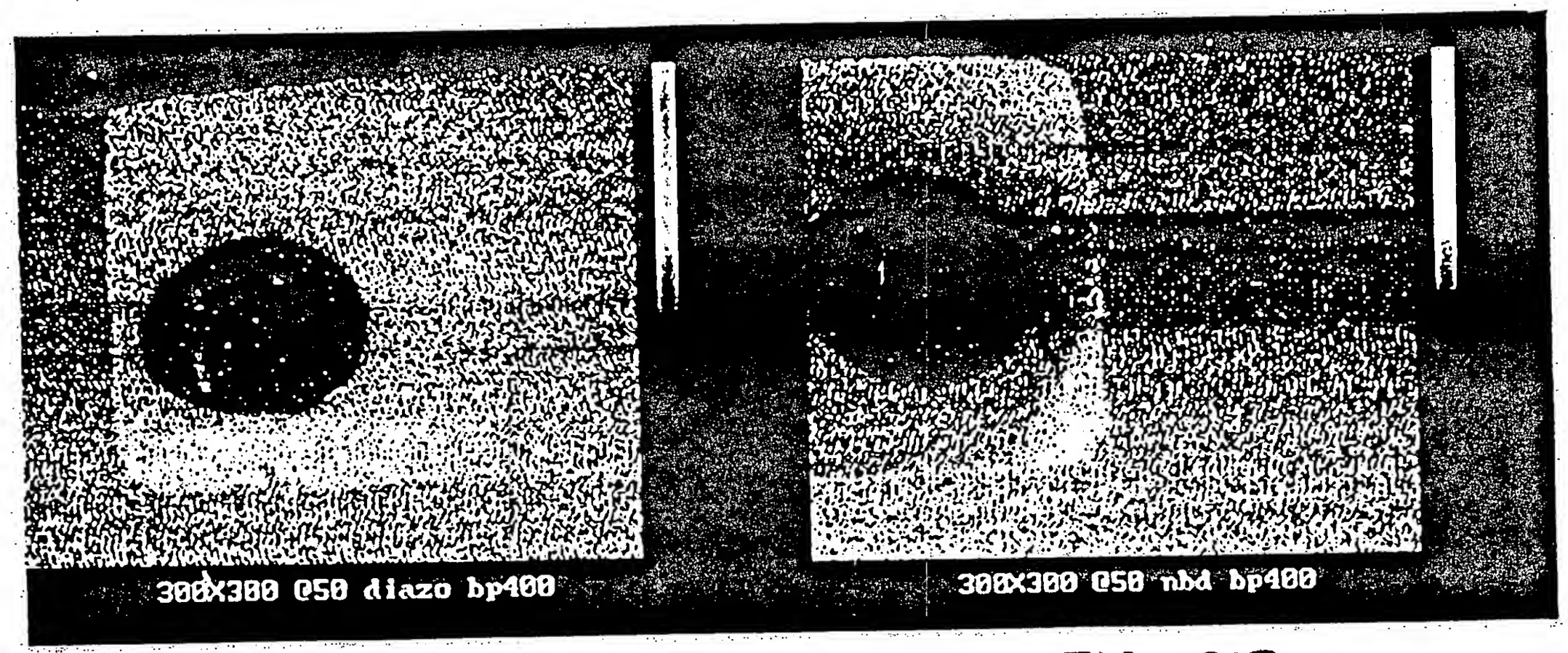


FIG. 21A. FIG. 21B.

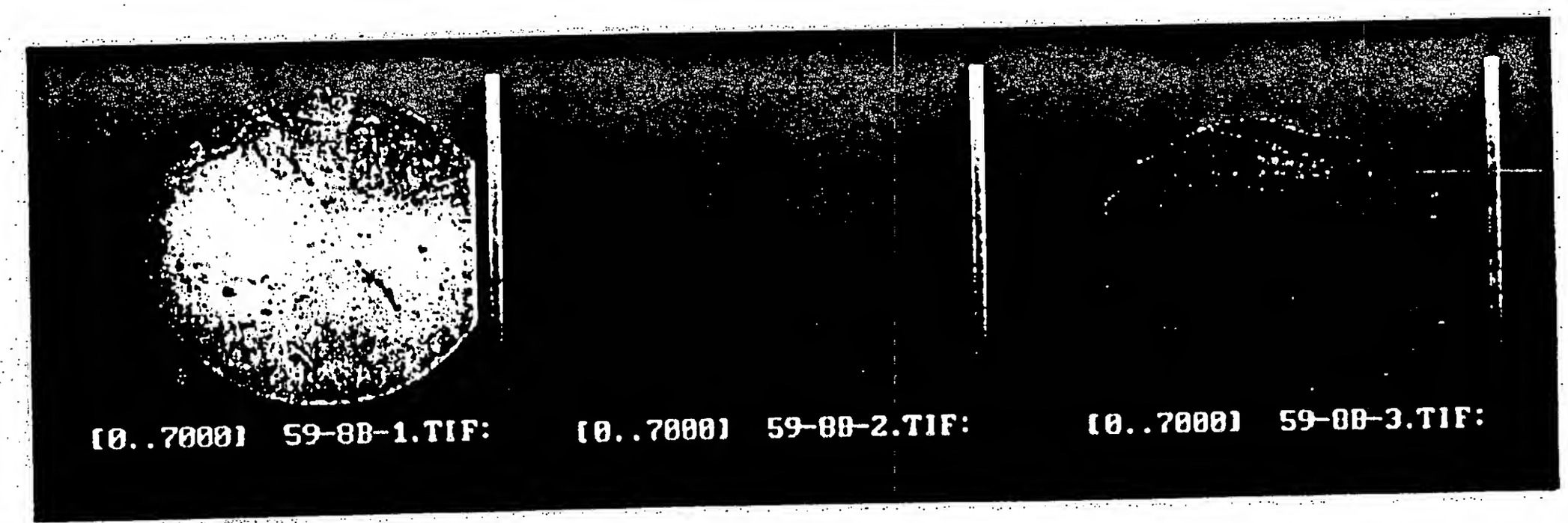


FIG. 39A. FIG. 39B. FIG. 39C.

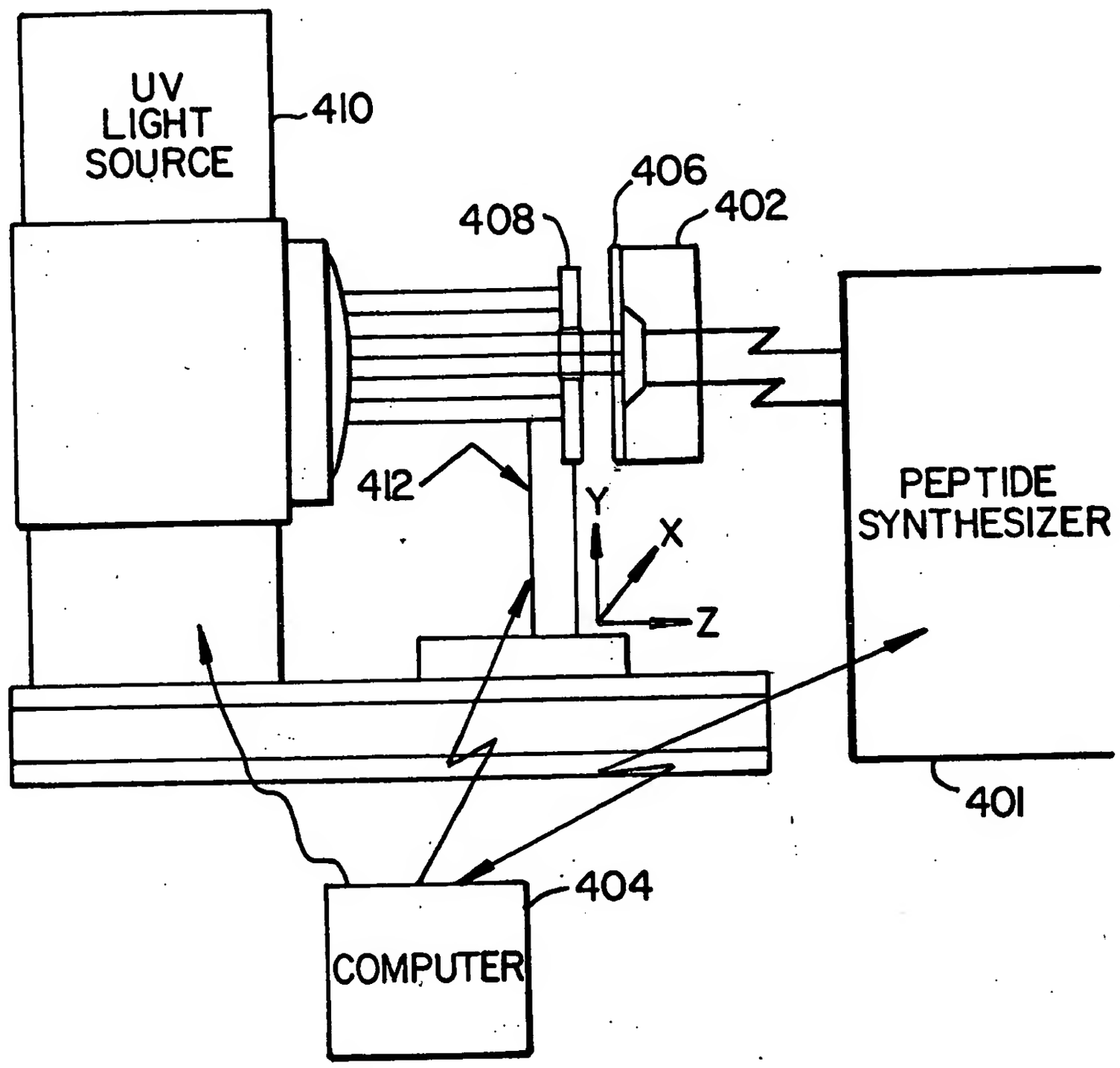


FIG. 23.

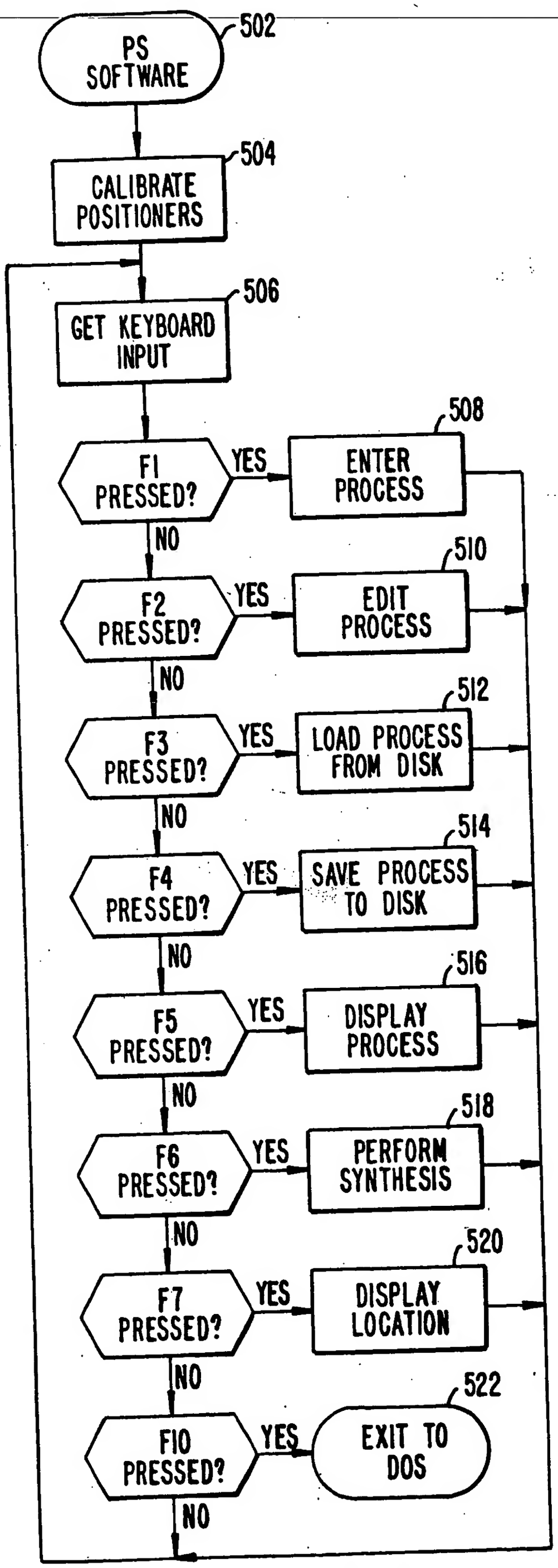


FIG. 24A.

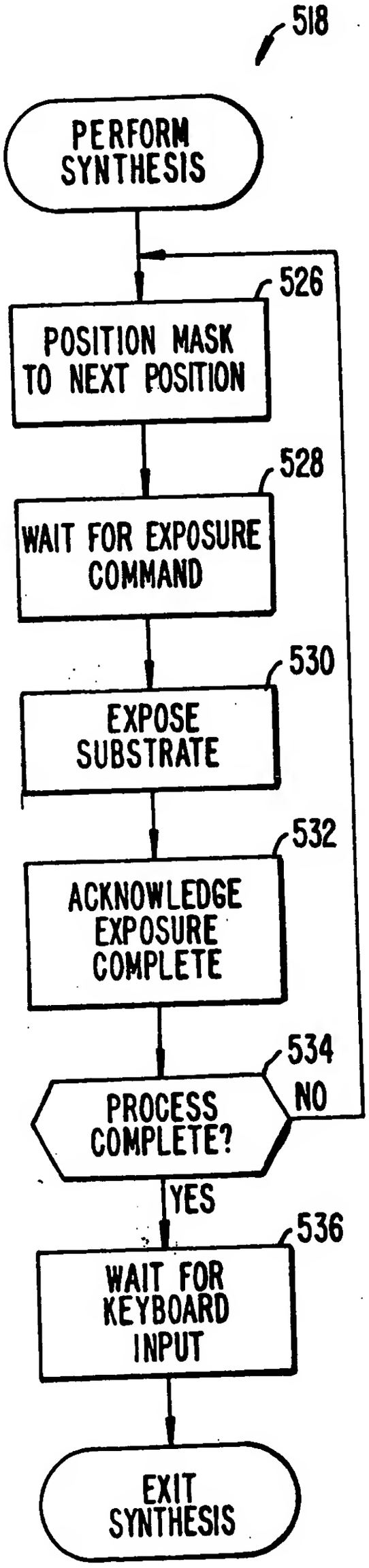


FIG. 24B.

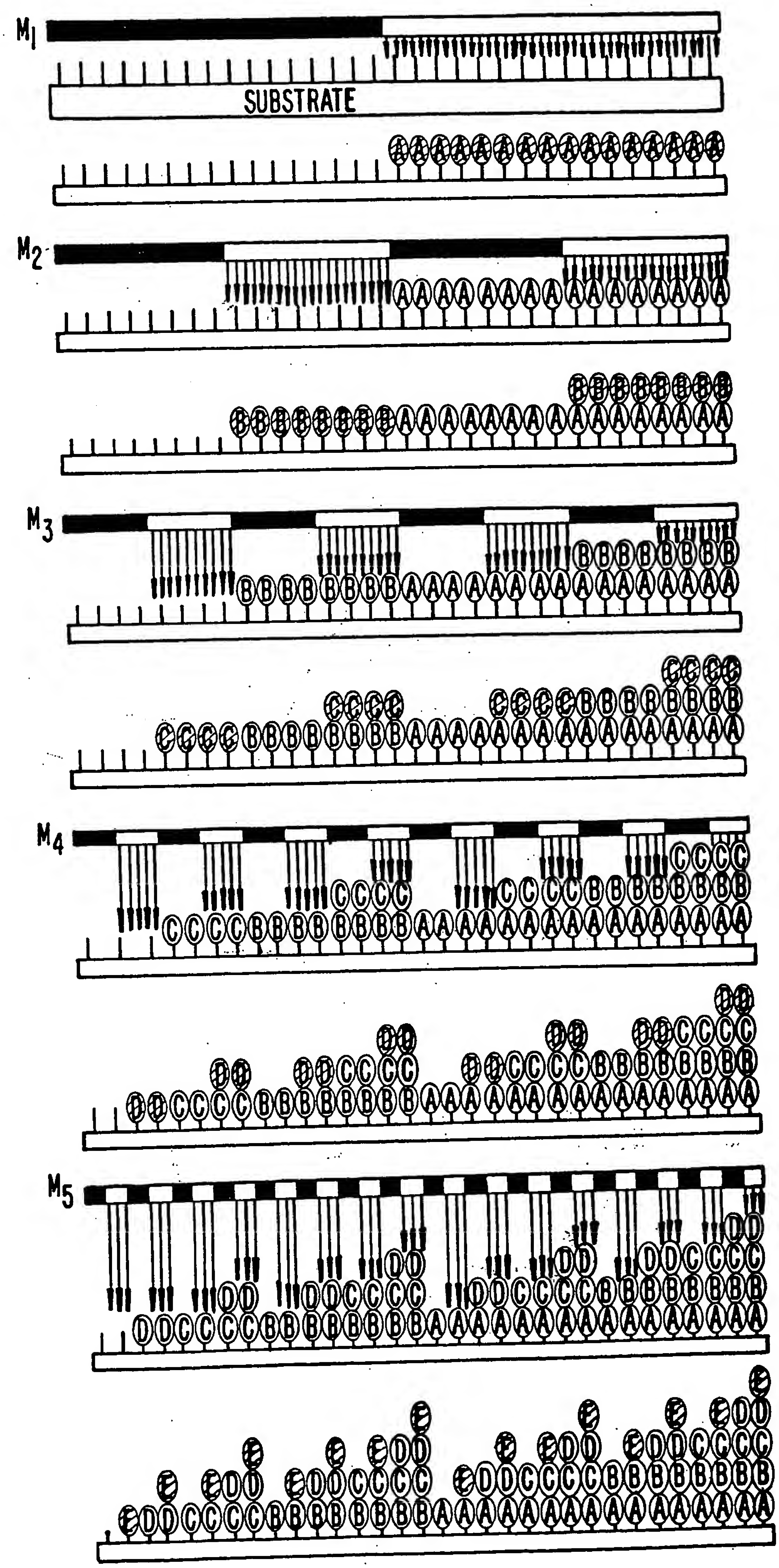


FIG. 25.

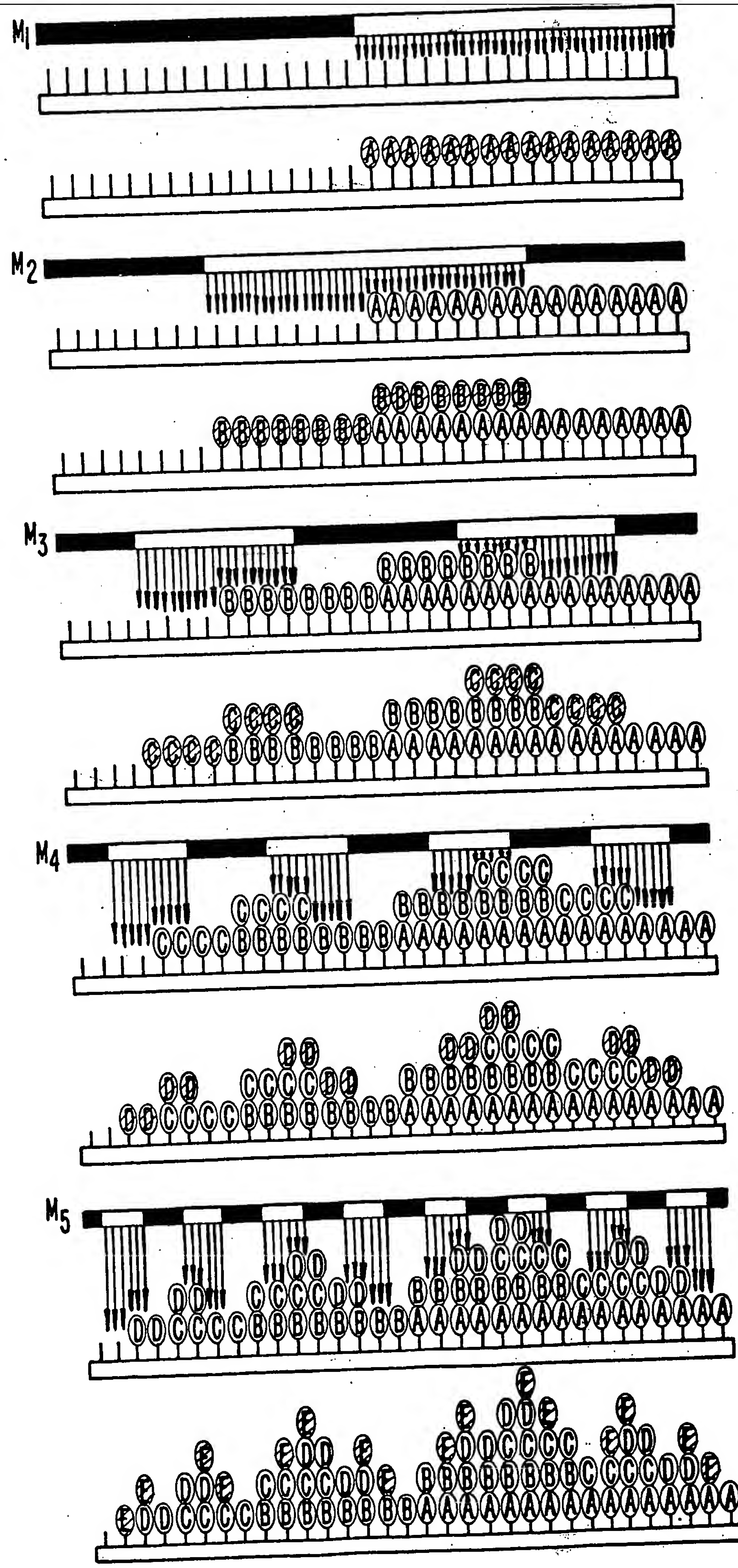


FIG. 26.

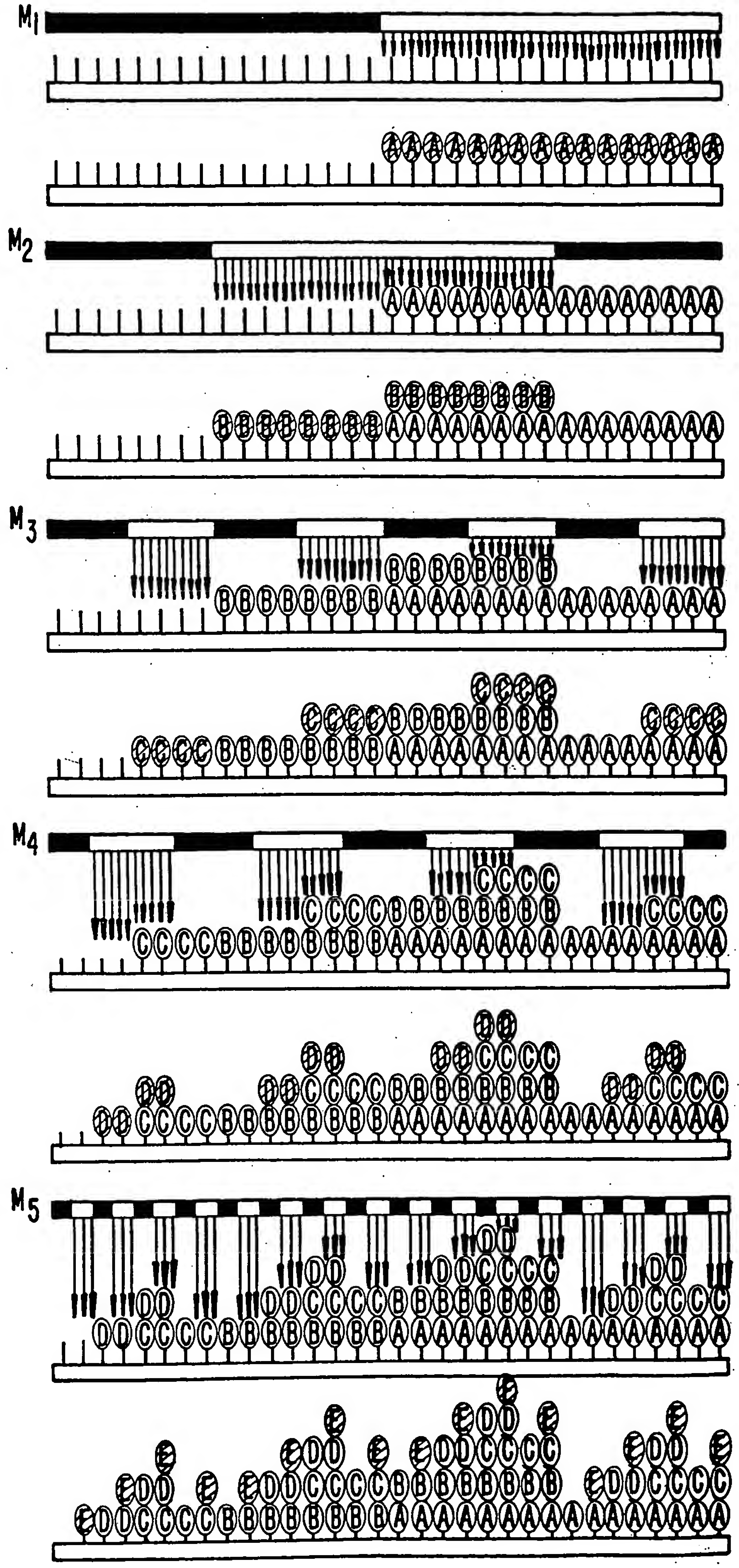


FIG. 27.

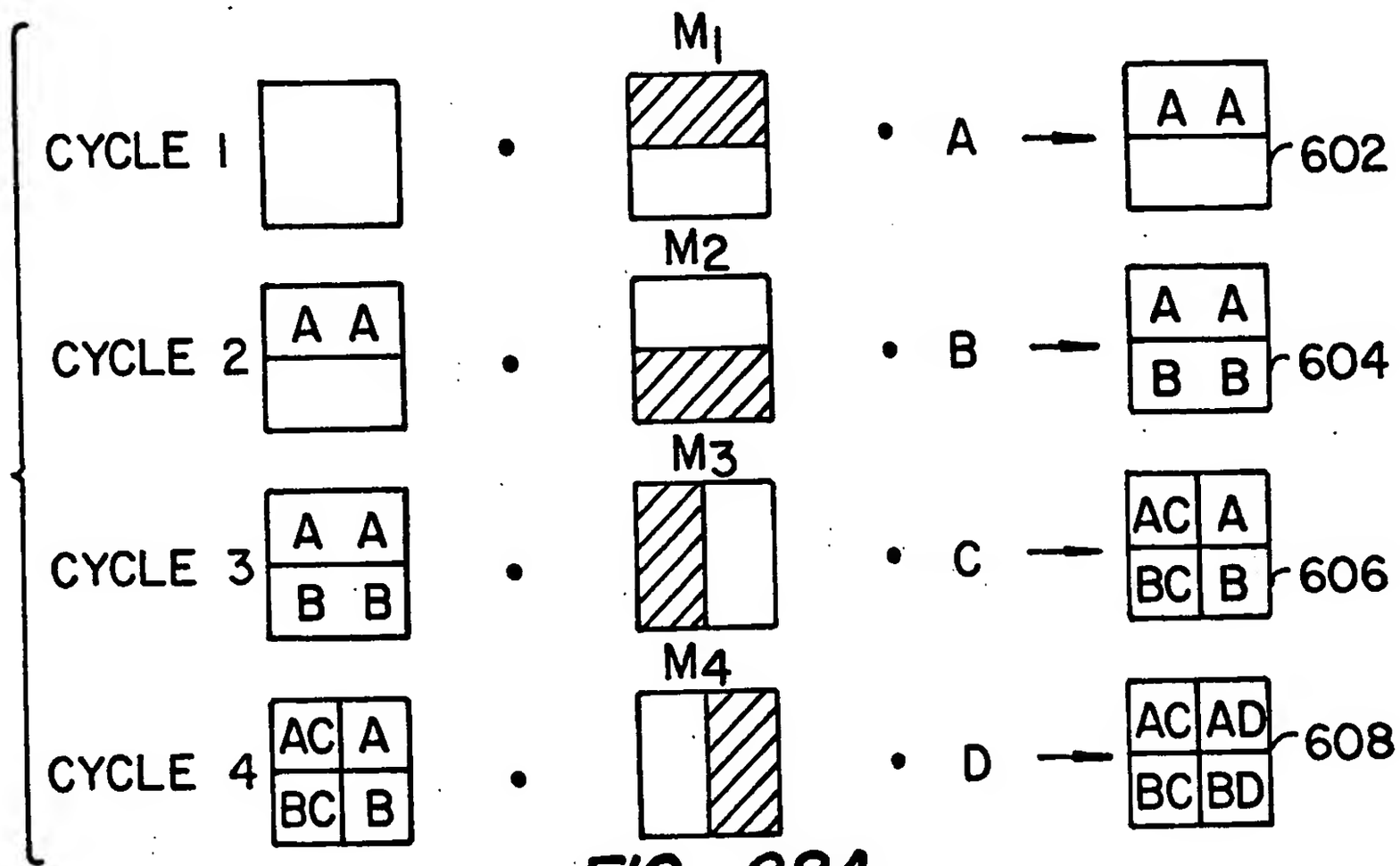


FIG. 28A.

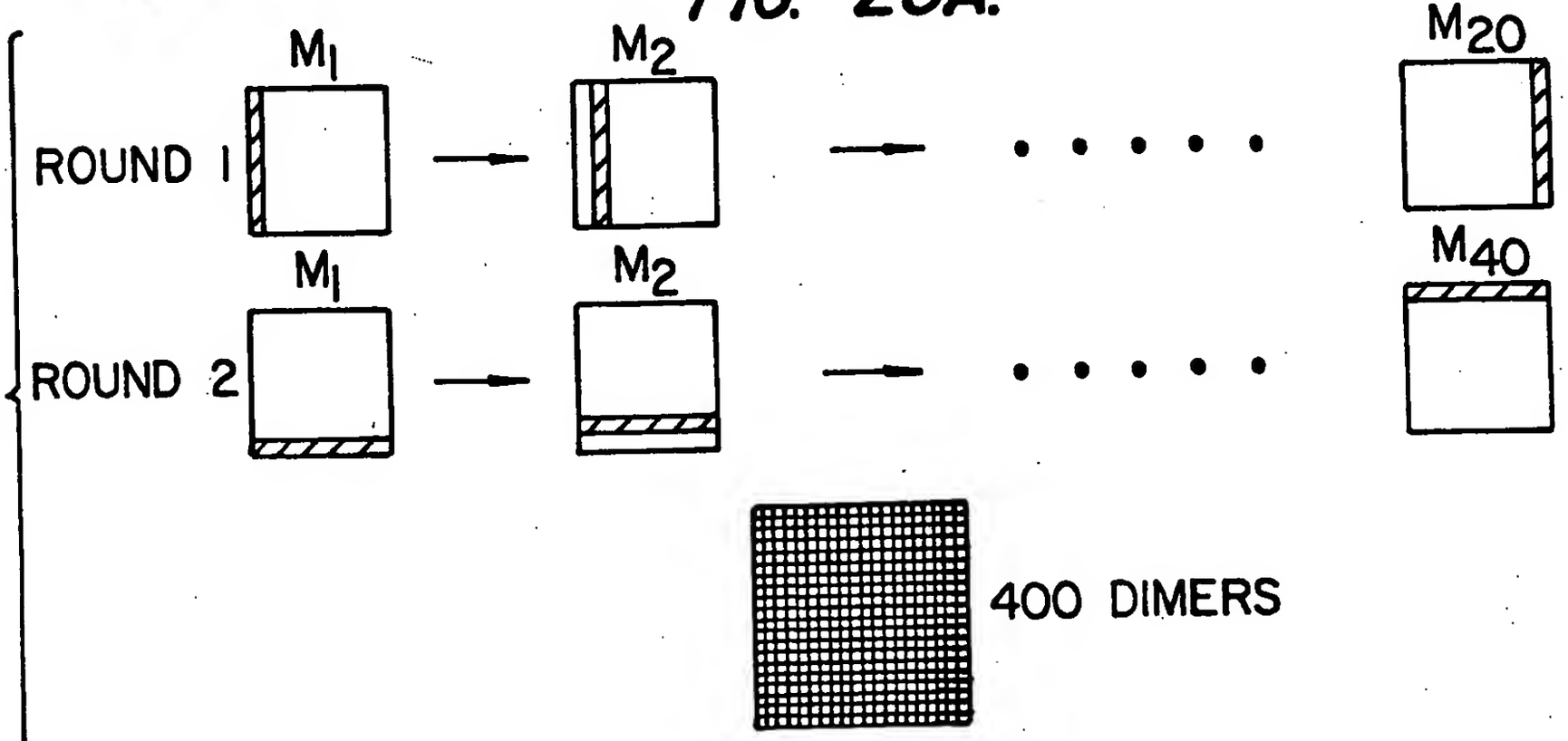


FIG. 28B.

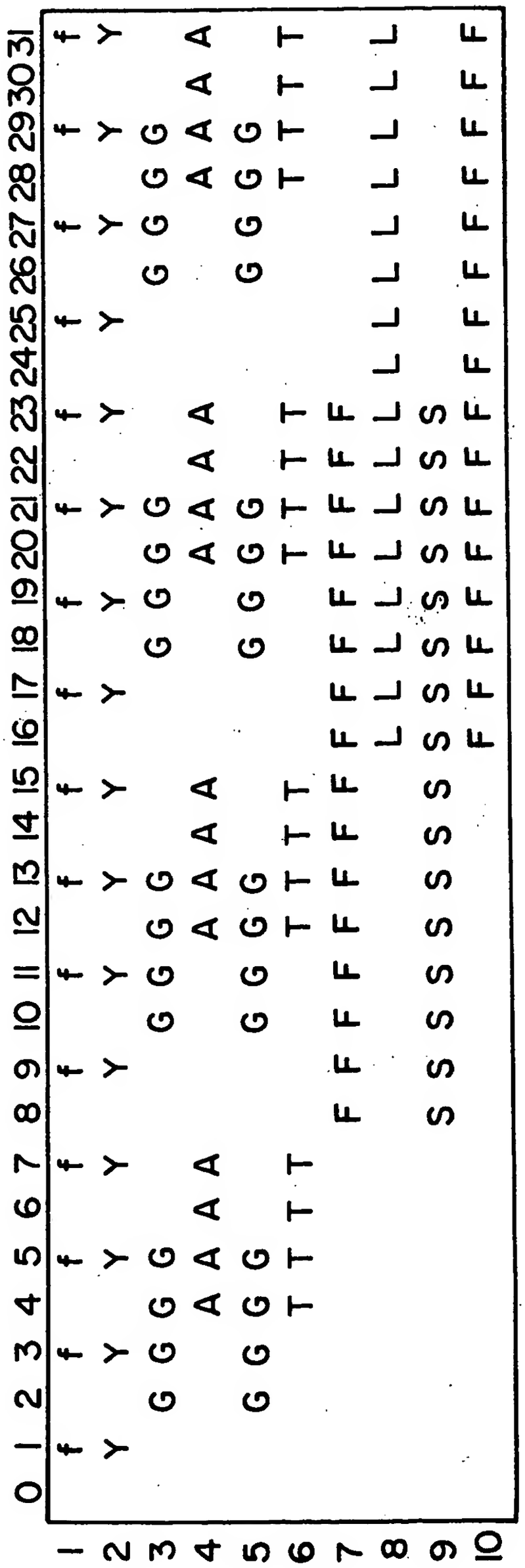

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
1 2 3 4 5 6 7 8 9 10
(x,y)

FIG. 29.

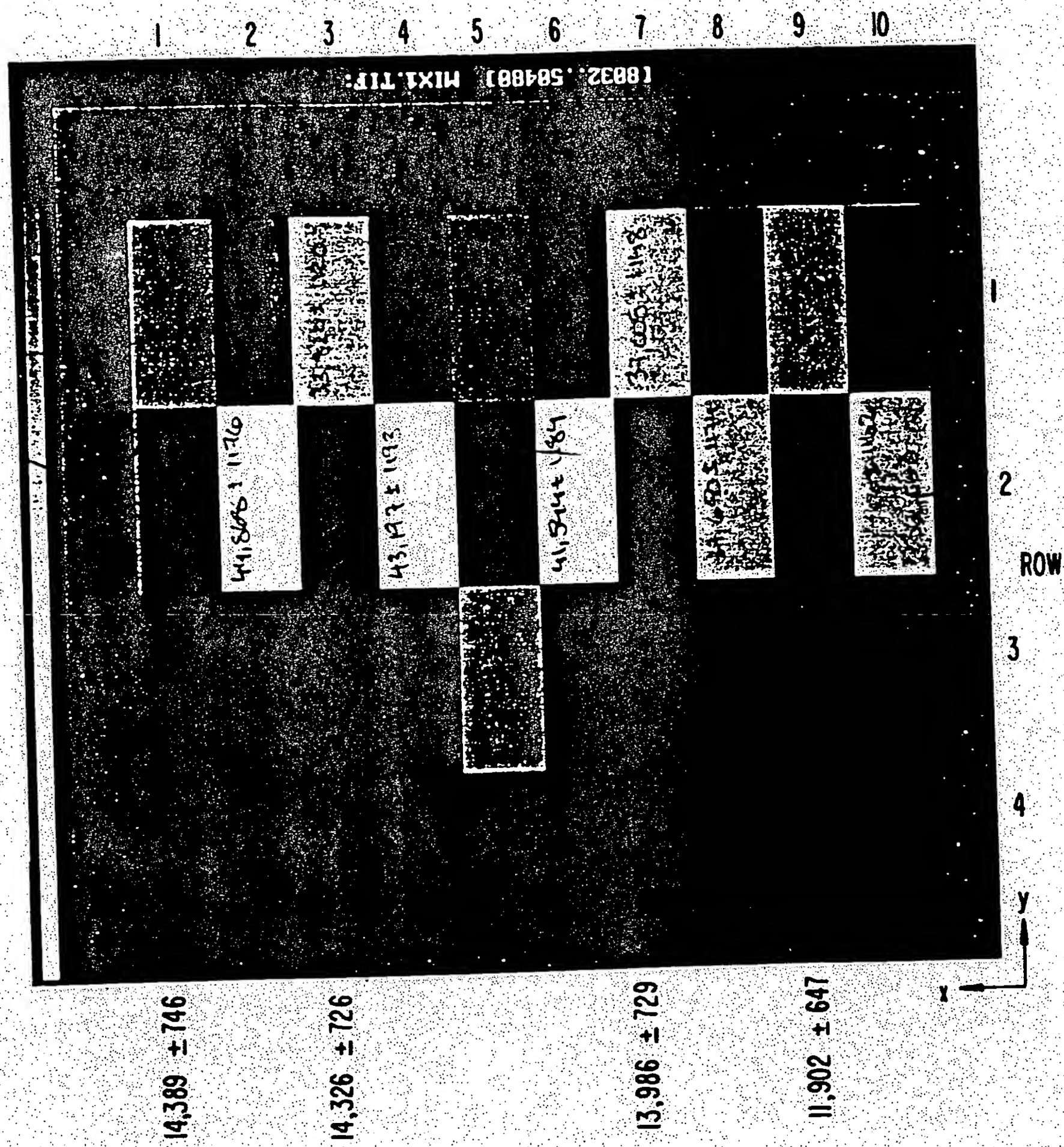
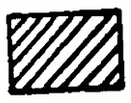
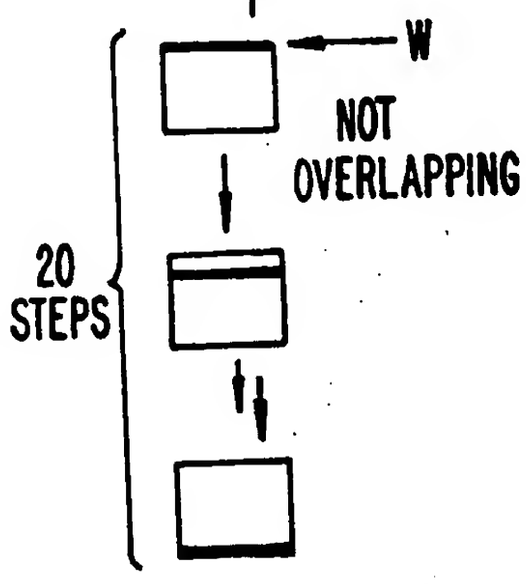
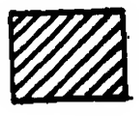

1 2 3 4 5 6 7 8 9 10
[8832,50480] MIX1.TIF
ROW
1
2
3
4
x
y
14,389 ± 746
14,326 ± 726
13,986 ± 729
11,902 ± 647

FIG. 30.

STEP	AREA PHOTOLYZED	MASK	COUPLE
1	100%		T
2	100%	"	V
3	100%	"	V
4	100%	"	K
5	50%		F
6 TO 25	Y20		G, A, R, K, C, M, S D, E, N, Q, F, H W, Y, L, P, V, I, T
26	50%		Q
27	100%		R

WILL GENERATE AN ARRAY OF 4 CLASSES OF PEPTIDES:

(1) RXKVVT
(2) RQXKVVT
(3) RQXFKVVT
(4) RXFKVVT

} WHERE X REPRESENTS SUBSTITUTION OF ALL 20 L-AMINO ACIDS

FIG. 31.

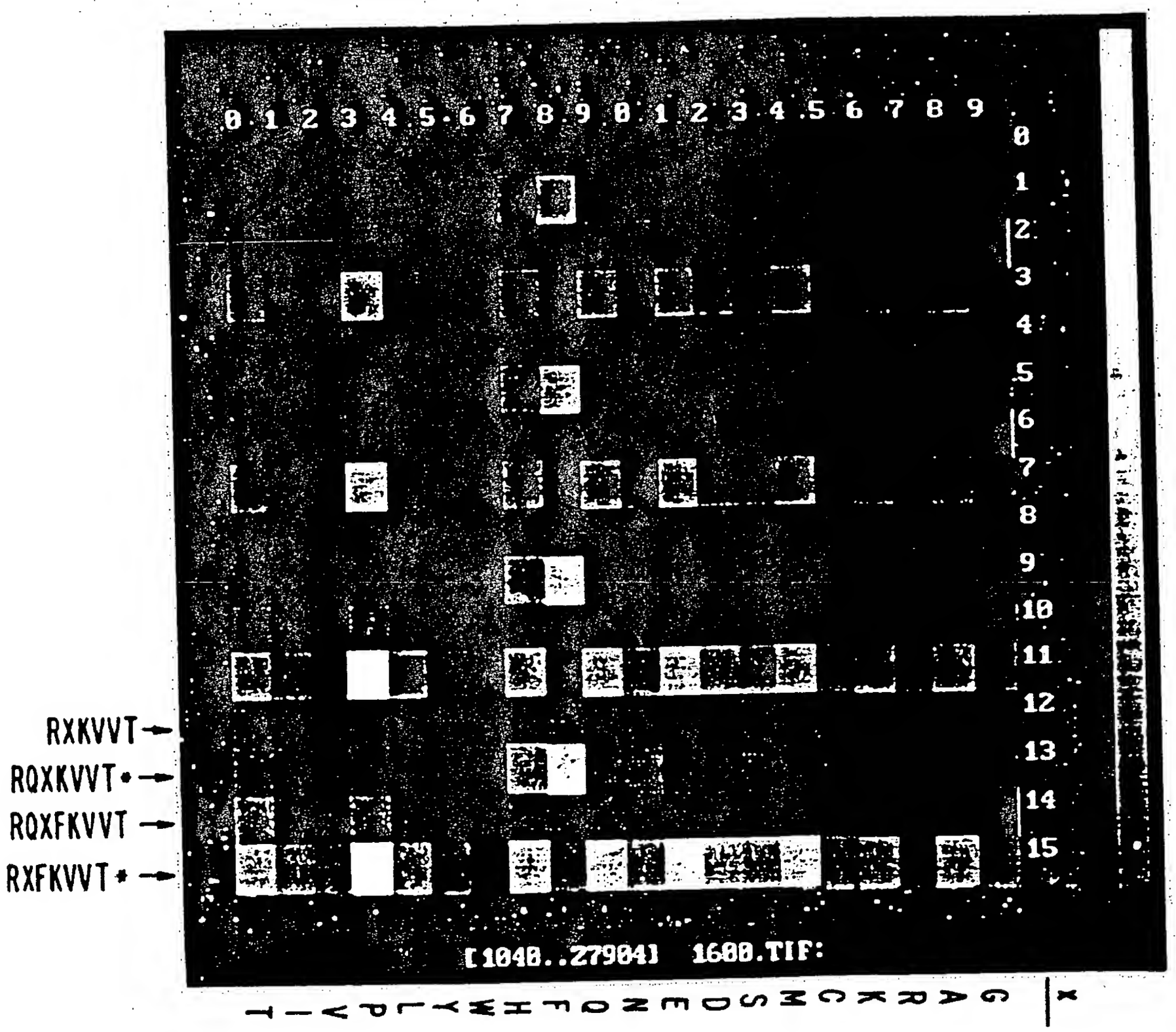

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
RXKVVT
RQXKVVT*
RQXFKVVT
RXFKVVT*
[1040..27904] 1600.TIF:

FIG. 32.

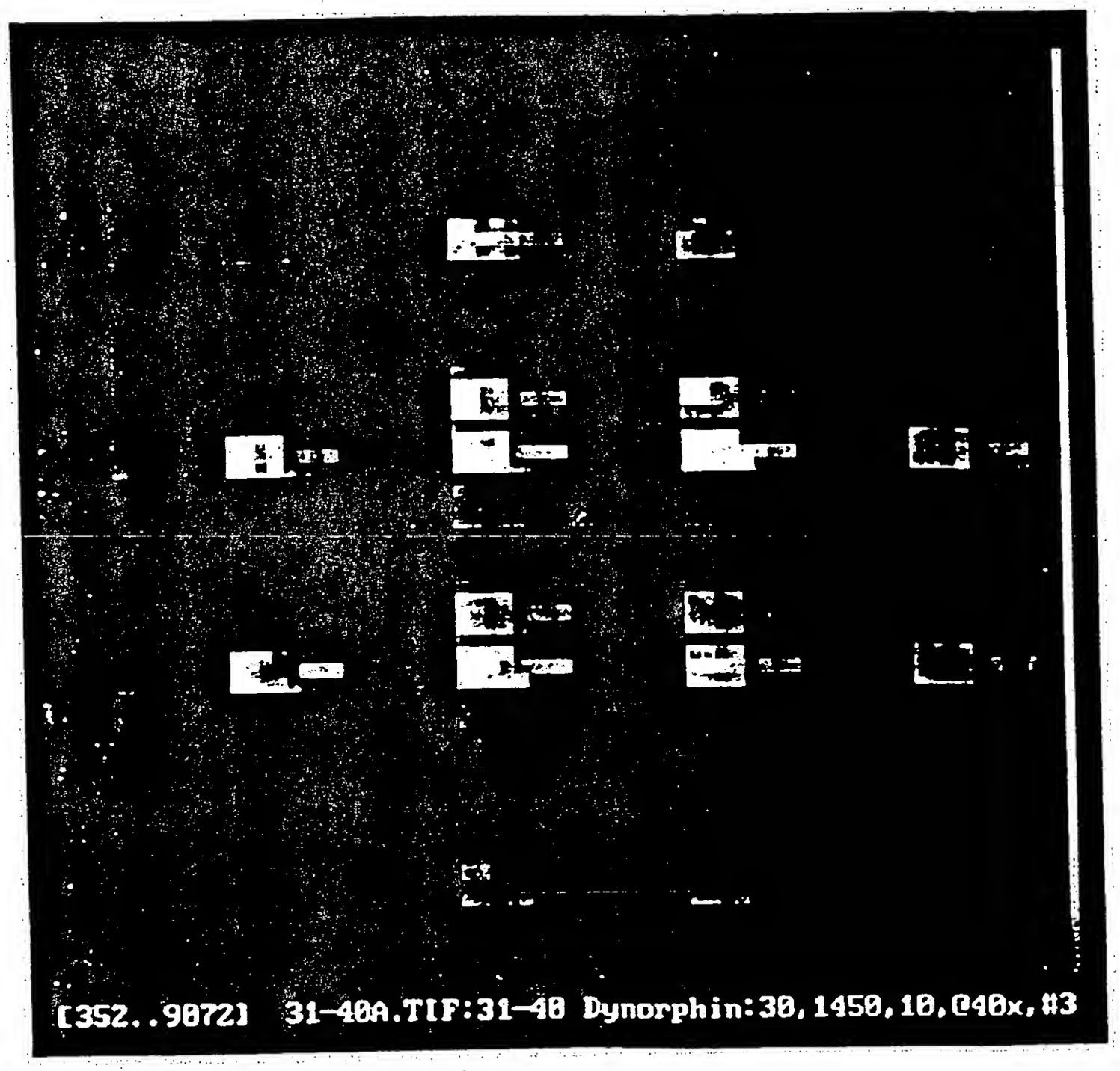


FIG. 33.

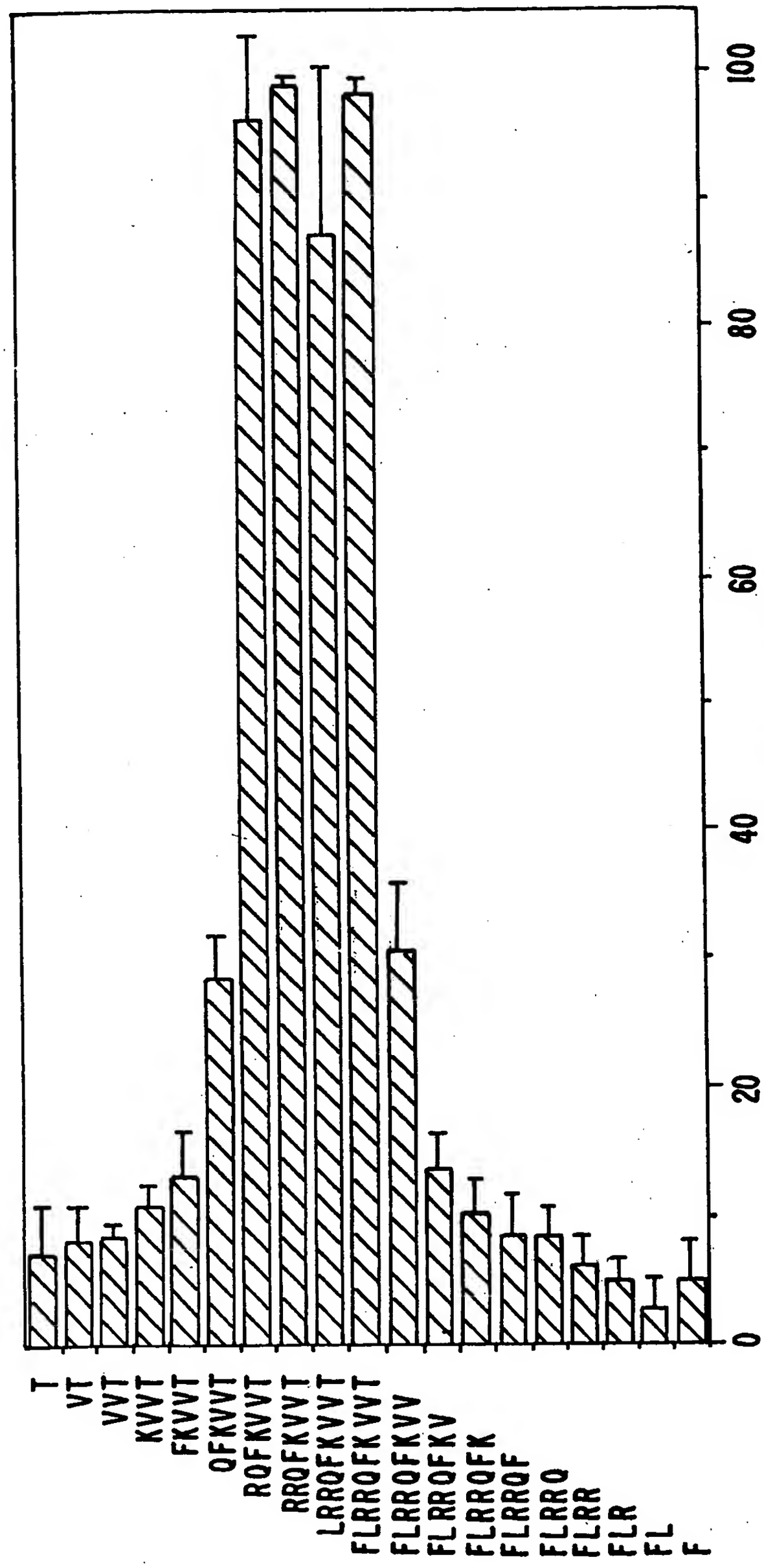

100
80
60
40
20
0
RELATIVE COUNTS (%)
T
VT
VVT
KVVT
FKVVT
QFKVVT
RQFKVVT
RRQFKVVT
LRRQFKVVT
FLRRQFKVV
FLRRQFKV
FLRRQFK
FLRRQF
FLRRQ
FLRR
FLR
FL
F

FIG. 34.

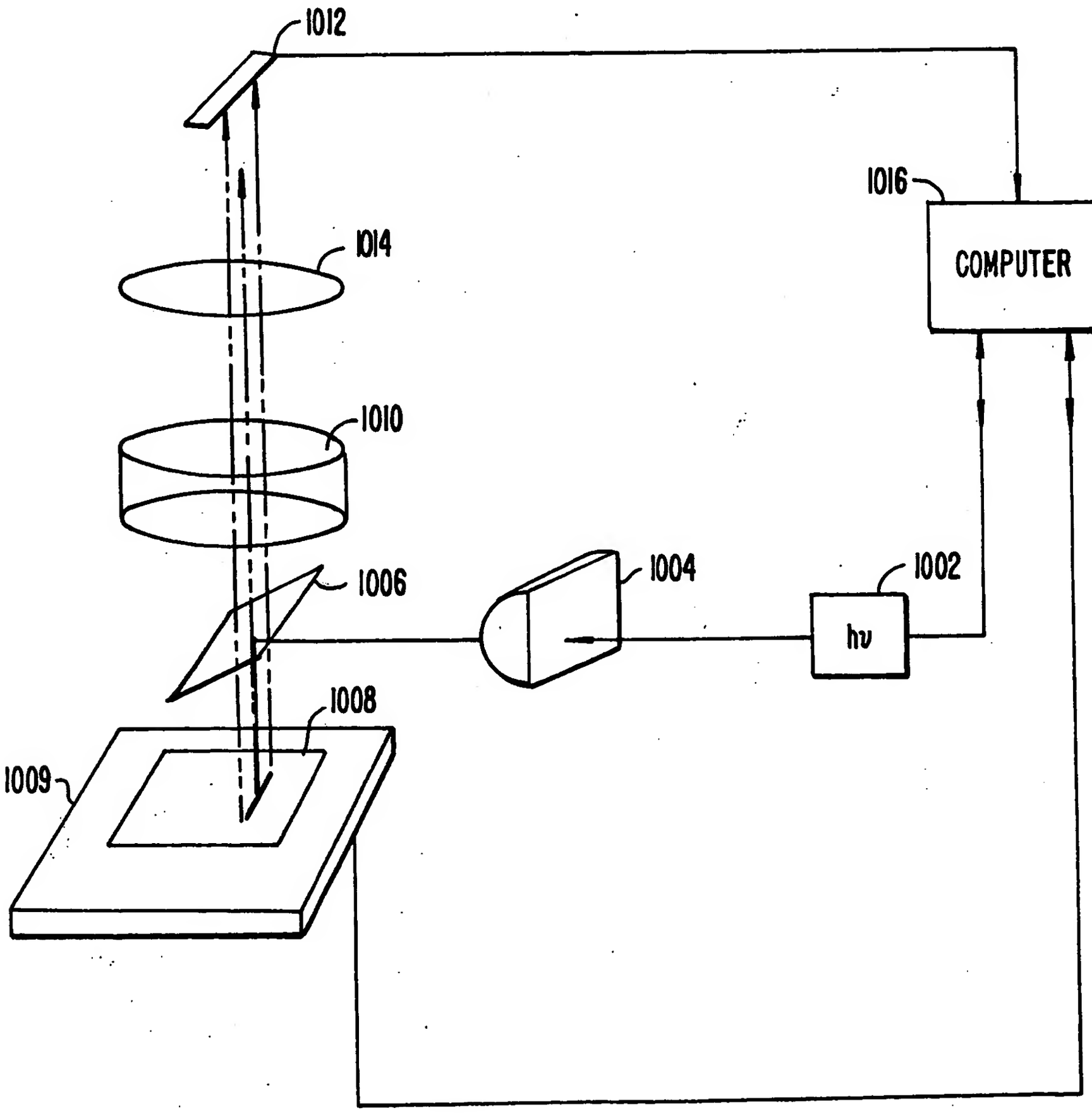


FIG 35.

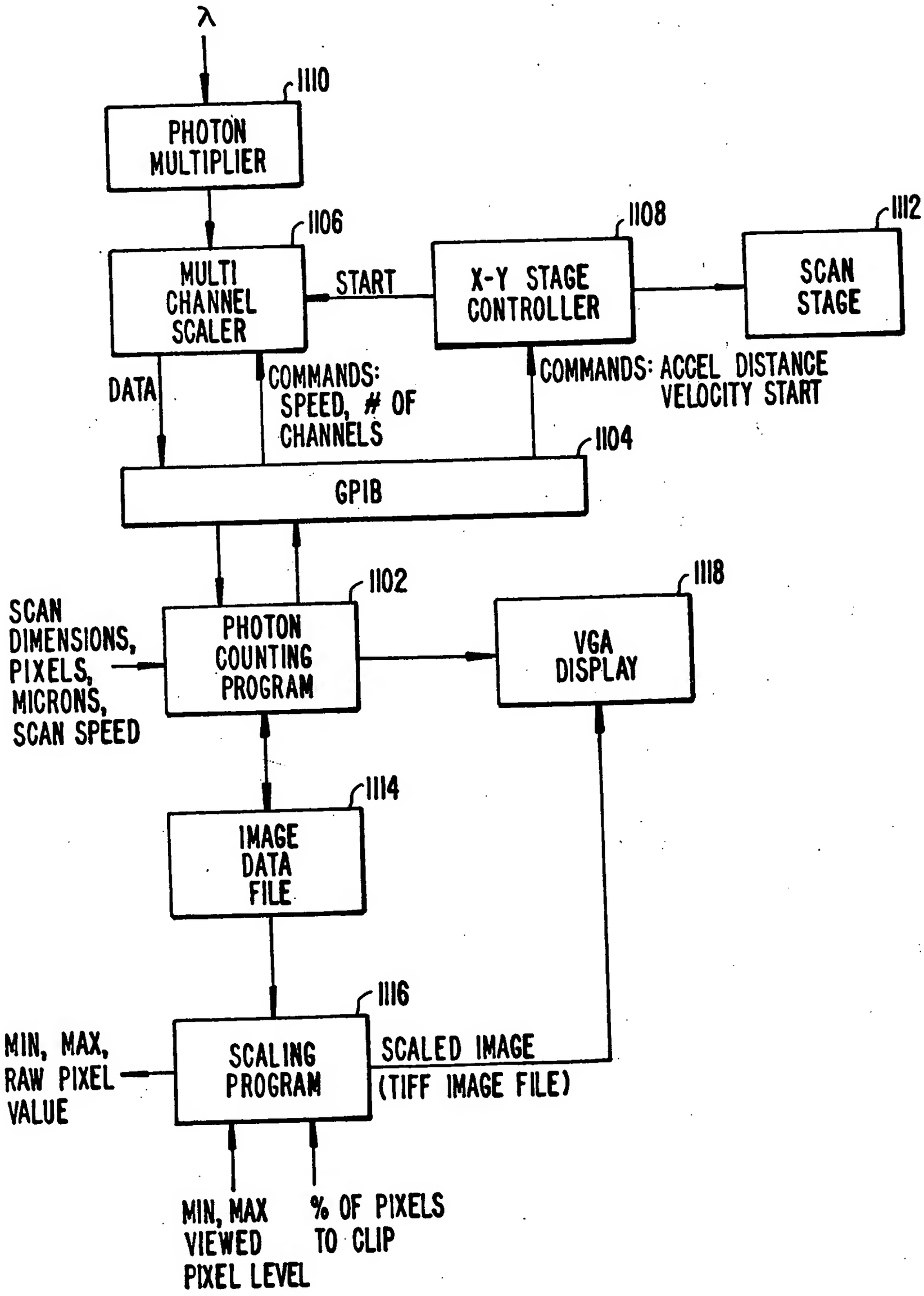

λ
1110
PHOTON MULTIPLIER
1106
MULTI CHANNEL SCALER
START
1108
X-Y STAGE CONTROLLER
1112
SCAN STAGE
DATA
COMMANDS: SPEED, # OF CHANNELS
COMMANDS: ACCEL DISTANCE VELOCITY START
1104
GPIB
SCAN DIMENSIONS, PIXELS, MICRONS, SCAN SPEED
1102
PHOTON COUNTING PROGRAM
1118
VGA DISPLAY
1114
IMAGE DATA FILE
1116
MIN, MAX, RAW PIXEL VALUE
SCALING PROGRAM
SCALED IMAGE (TIFF IMAGE FILE)
MIN, MAX VIEWED PIXEL LEVEL
% OF PIXELS TO CLIP

FIG. 36.

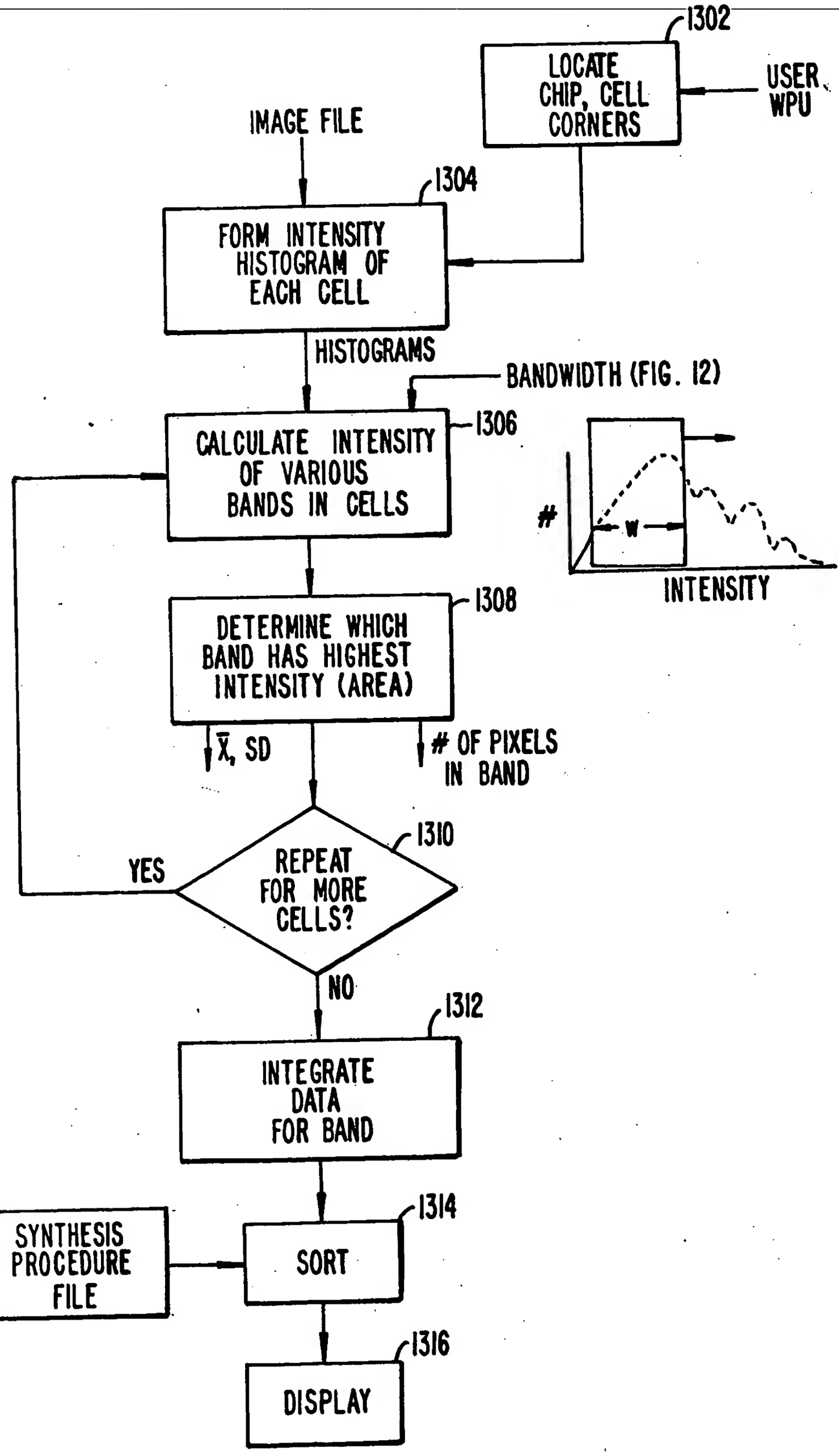
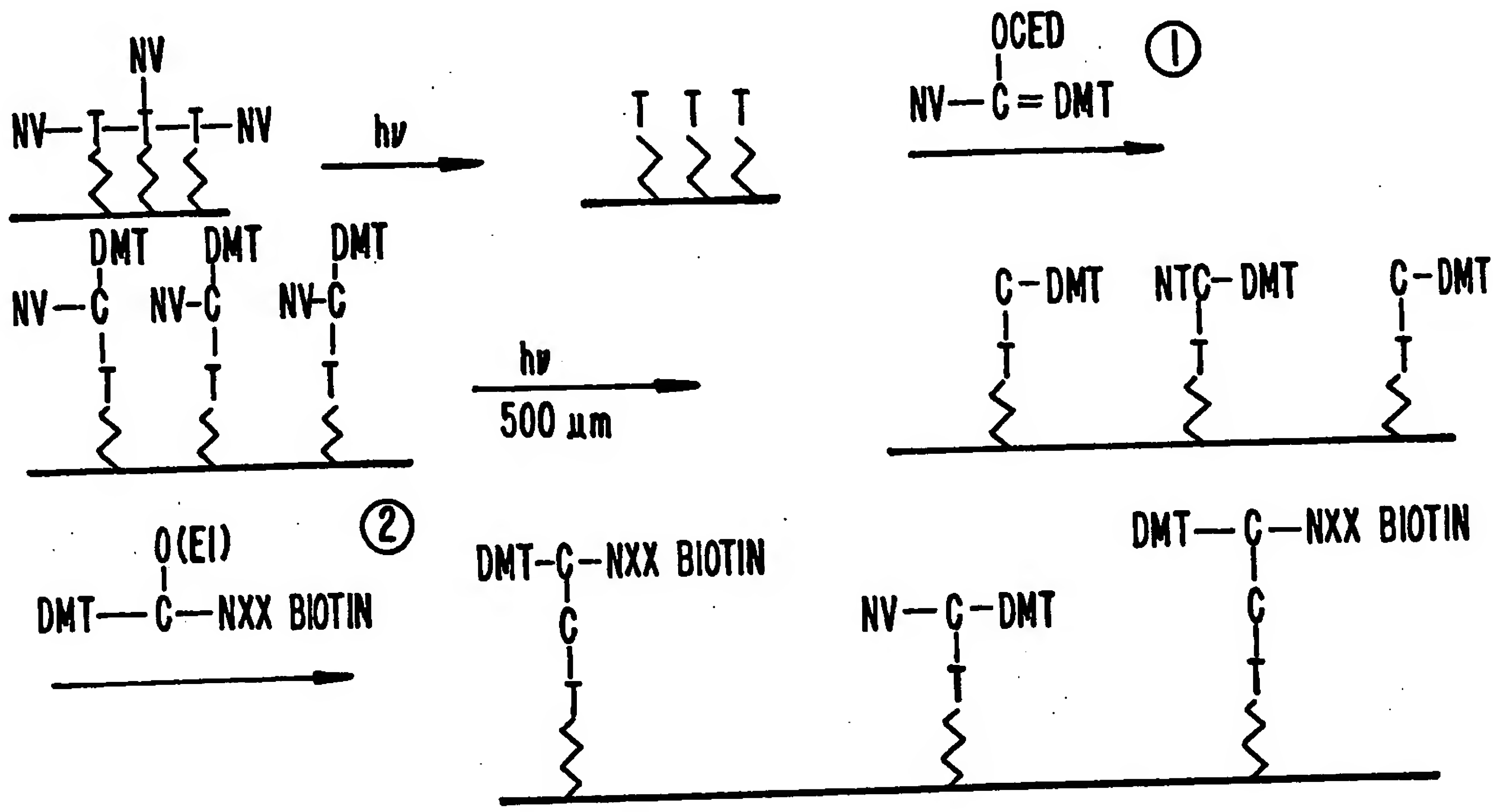

1302
LOCATE CHIP, CELL CORNERS
USER WPU
IMAGE FILE
1304
FORM INTENSITY HISTOGRAM OF EACH CELL
HISTOGRAMS
BANDWIDTH (FIG. 12)
CALCULATE INTENSITY OF VARIOUS BANDS IN CELLS
1306
#
W
INTENSITY
DETERMINE WHICH BAND HAS HIGHEST INTENSITY (AREA)
1308
X̄, SD
OF PIXELS IN BAND
YES
REPEAT FOR MORE CELLS?
1310
NO
INTEGRATE DATA FOR BAND
1312
SYNTHESIS PROCEDURE FILE
SORT
1314
DISPLAY
1316

FIG. 37.


NV
NV—T—T—T—NV
hν
T T T
OCED
NV—C=DMT
①
DMT DMT DMT
NV—C NV-C NV-C
T T T
hν
500 μm
C-DMT NTC-DMT C-DMT
O(EI)
DMT—C—NXX BIOTIN
②
DMT-C-NXX BIOTIN
NV—C-DMT
DMT—C—NXX BIOTIN

1)

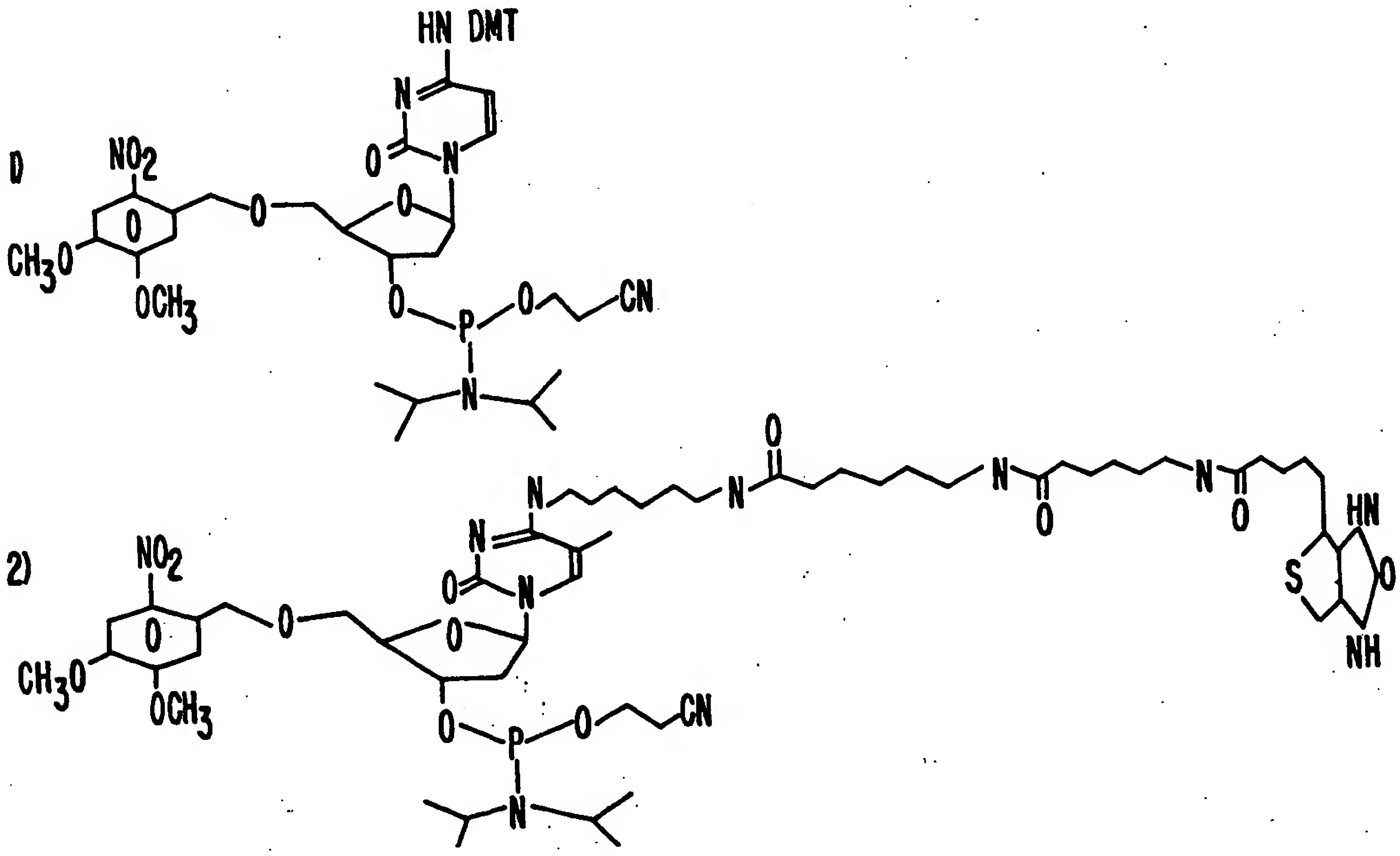

HN DMT
N
O
NO2
CH3O
OCH3
P
CN
2)
HN
S
NH

FIG. 38.

FIG. 40A.

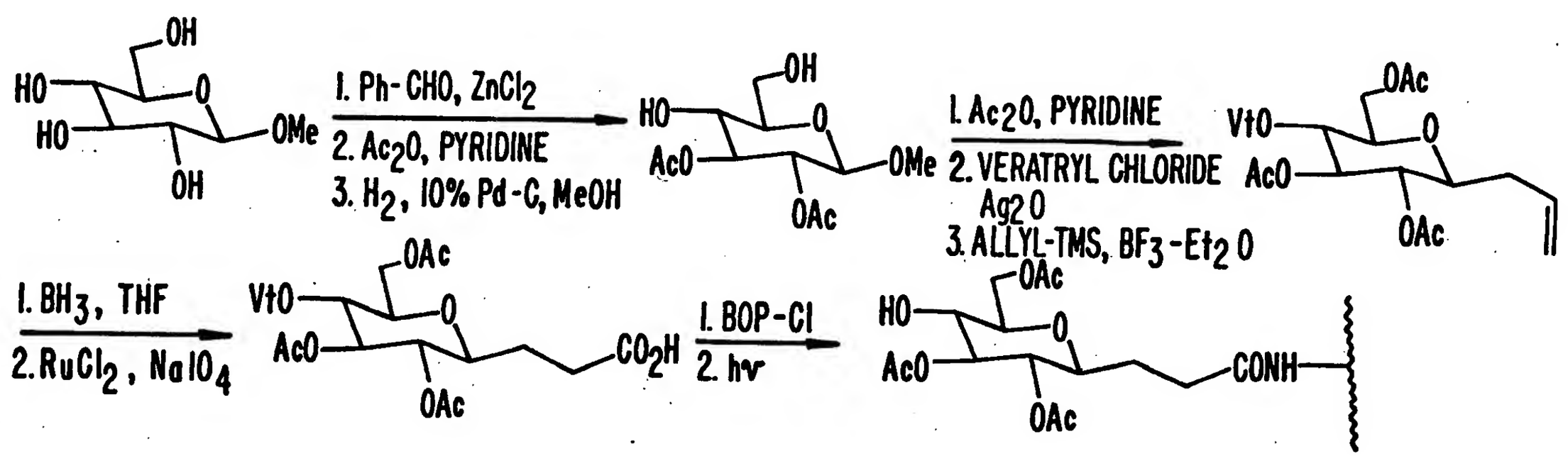


FIG. 40B.

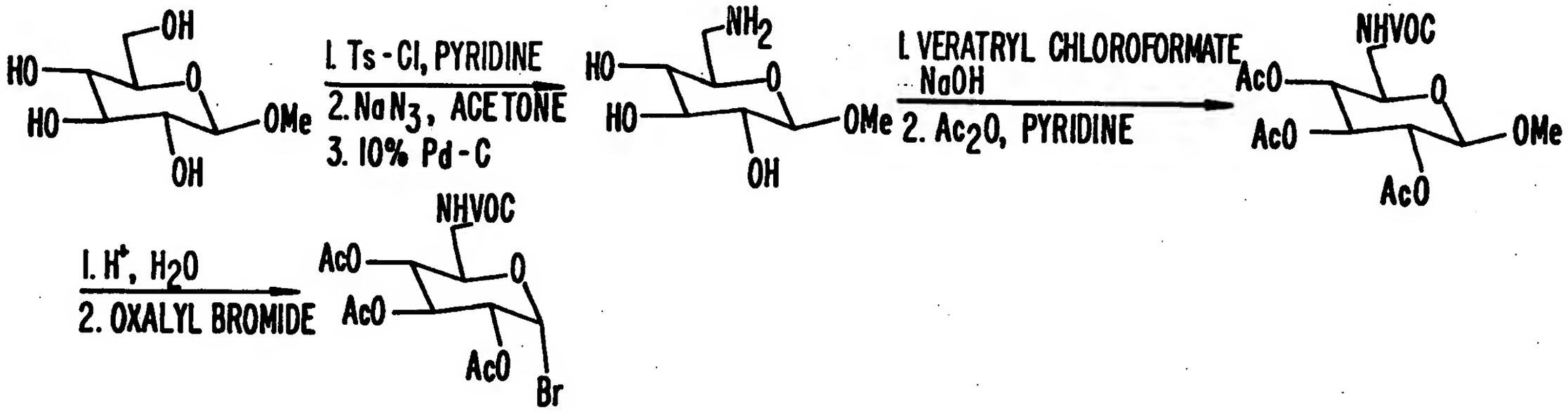
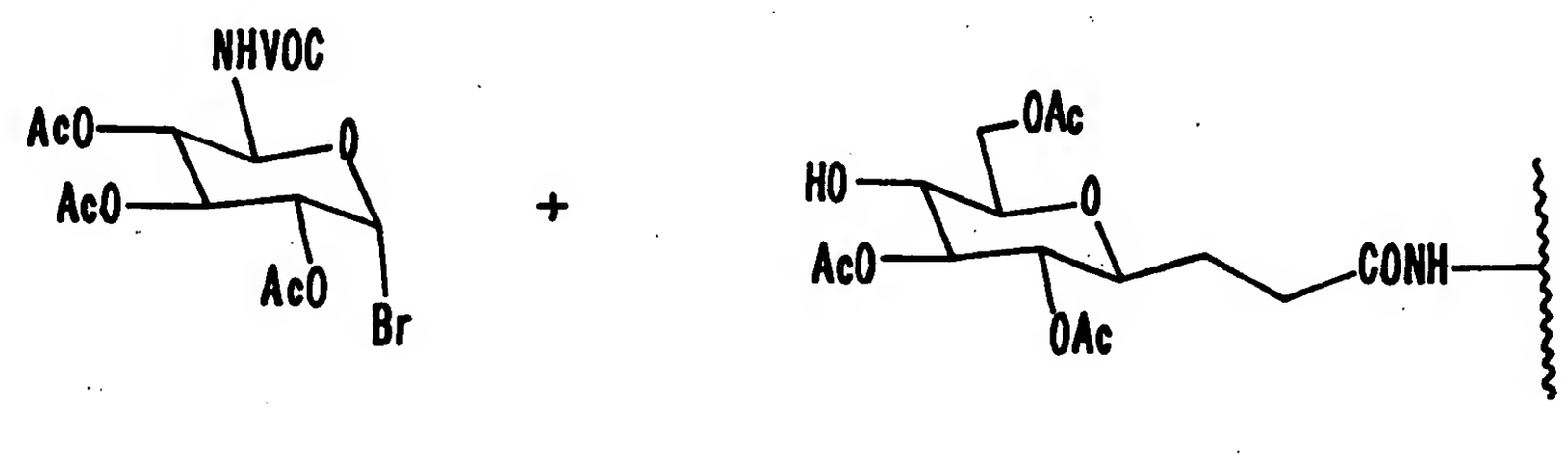


FIG. 40C.



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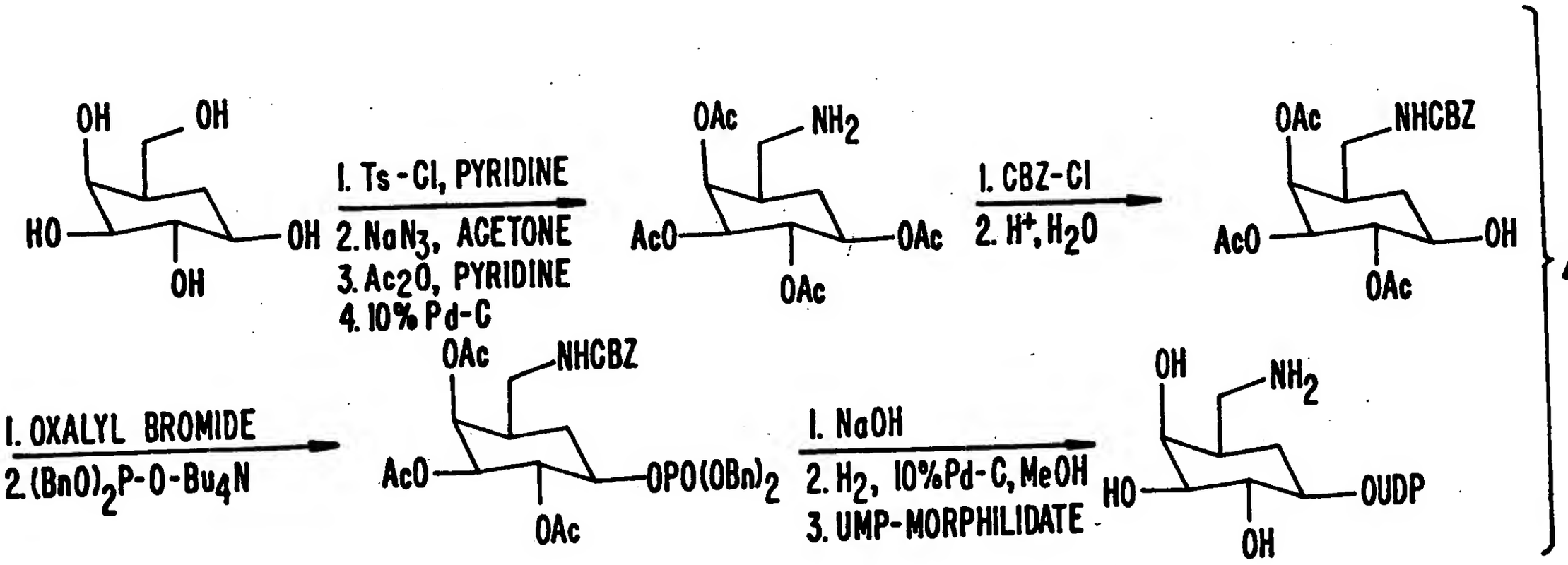

FIG. 40D.

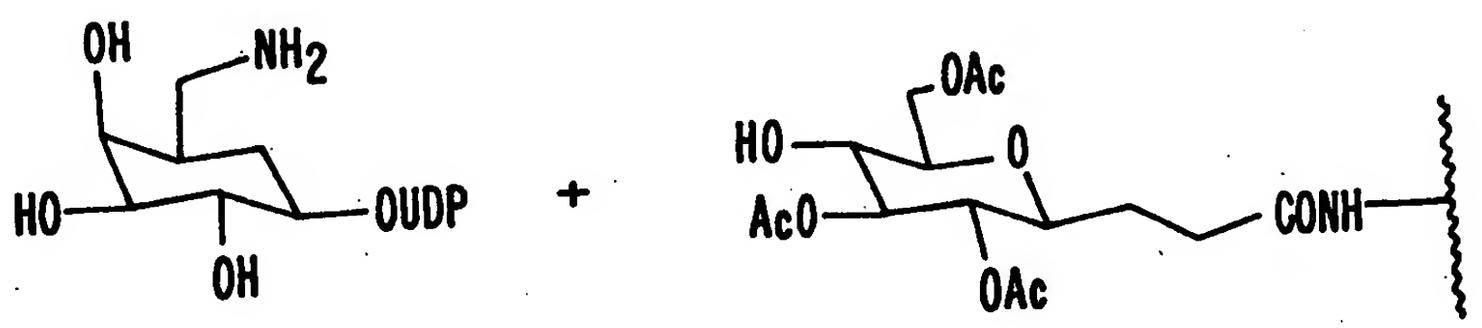

FIG. 40E.

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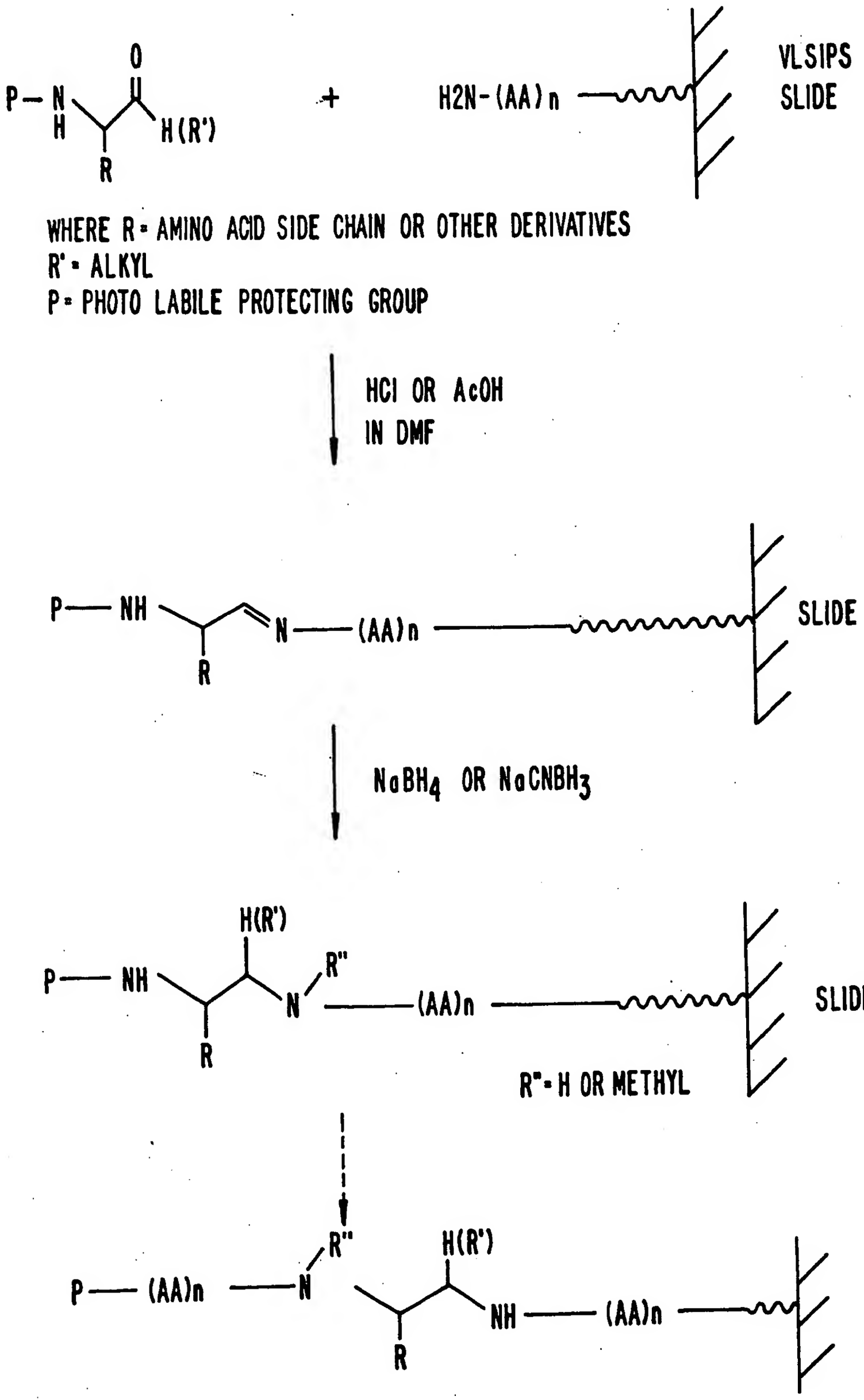
P—N H O H(R') R
+
H2N-(AA)n
VLSIPS SLIDE
WHERE R = AMINO ACID SIDE CHAIN OR OTHER DERIVATIVES
R' = ALKYL
P = PHOTO LABILE PROTECTING GROUP
HCl OR AcOH IN DMF
P—NH N—(AA)n SLIDE R
NaBH4 OR NaCNBH3
P—NH H(R') N R" R (AA)n SLIDE
R" = H OR METHYL
P—(AA)n—N R" H(R') NH—(AA)n R

FIG. 41.